



CITY OF NOTTINGHAM.

ANNUAL HEALTH REPORT

FOR

1903,

BY

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Nottingham :

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CITY OF NOTTINGHAM.

1903—1904.

HEALTH COMMITTEE.

COUNCILLOR PAGE, J.P., MAYOR.

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Vice-Chairman :

ALDERMAN BENTLEY.

ALDERMAN BENNETT.

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„ FLEEMAN, SHERIFF.

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„ TUSTIN.

„ J. WHITE.

*TO THE CHAIRMAN AND MEMBERS
OF THE HEALTH COMMITTEE OF THE
NOTTINGHAM CORPORATION.*

GENTLEMEN,

The Report for 1903 is the 15th Annual Report which I have had the honour of preparing as Medical Officer of Health for Nottingham.

There are again, as last year, some exceptional features about the principal vital statistics for the period under review.

I may once more remind you that, with so recent a Census as that of 1901 to guide us, there is little probability of serious error in the estimates of population upon which the various rates are based.

The birth-rate for 1903 was equal to 28·3 per 1000 living. This is 0·5 above the extremely low rate for 1902, and identical with the rates for 1900 and 1901. But with these exceptions there has been no previous birth-rate so low since the commencement of registration.

The recorded general death-rate of the City was equal to 16·52 per 1000, and is the lowest on record. The infantile death-rate per 1000 births during the year was equal to only 165—slightly higher than during 1902, but still a very low rate for Nottingham.

The death-rate from the seven principal epidemic diseases of the Registrar-General, swollen by an increase in the deaths from measles, whooping-cough, scarlet fever, and diphtheria, was higher than in 1902 (2·01 for 1903 as compared with 1·62 for 1902) but is otherwise the lowest on record. The deaths from enteric fever and diarrhœa, owing to the cold and wet season, were exceptionally few. The deaths from scarlet fever numbered only 34, but these were nearly 50 per cent. more than those of 1902 (23).

The equipment of the department with necessary plant for the performance of some of its most essential work proceeds apace.

The new refuse destructors at the Eastcroft and at Radford are now completed and in full use, and those for Basford and Bulwell are already on the stocks. With the advent of these destructors the huge accumulations of night-soil within the City, which at one time constituted so grave a menace to the health of its inhabitants, have become things of the past.

When the existing dry-system of excrement disposal—the pail-system—shall have been superseded by one of water-carriage—and the accomplishment of this is on all hands agreed to be only a matter of time—certain details alone will remain to be completed in order to perfect the existing arrangements for sewage removal and disposal in Nottingham.

One of the most important of these details is probably the substitution of cast-iron pipes for those of pot or stoneware, for all domestic drains at least.

The new small-pox hospital, erected on the northernmost tongue of Bulwell Forest at the early part of the year, has done excellent service in accommodating most of the cases of small-pox which have occurred in the City during the, unfortunately, still current outbreak.

The hospital, it should be noted, has done none of the harm that was so confidently predicted of it by certain residents and property owners in the neighbourhood, and their advisers.

It is, I think, matter for regret, that the project for the establishment of public abattoirs in this City is making so little headway. There can be no doubt of the desirability of abattoirs in the public interest.

The complex questions involved in the so-called housing problem still await solution, so far at least as Nottingham is concerned. The two great difficulties in the way of a satisfactory solution, it is hardly necessary to say, are (1) the impossibility of securing, at the outset at any rate, a profitable return (in a business sense) from any useful outlay, and (2) the *vis inertiae* of the class most in need of assistance.

PHILIP BOOBYER.

TABLE I.

Nottingham. Population, Inhabited Houses, Marriages, Births and Deaths for 1903, and for the 10 years 1893-1902.

	Estimated Population.	Inhabited Houses.	† Marriages	Births.	Deaths.			Deaths in Public Institutions.
					Total at all ages.	Under One Year.	Under 5 Years.	
1903	245,985	56,784	2287	6945	4063	1144	1590	789
1902	243,191	55,240	2256	6867	4118	1101	1382	666
1901	240,438	53,107	2255	6801	4346	1330	1774	791
1900	[*] 237,770	52,537	2153	6731	4555	1314	1811	770
1899	239,384	53,052	2037	6910	4689	1470	1954	802
1898	236,137	52,051	1912	6796	4058	1209	1689	636
1897	232,935	...	1895	6742	4277	1362	1869	587
1896	229,775	...	1749	6758	3987	1136	1709	594
1895	226,659	...	1658	6717	4195	1269	1640	522
1894	223,584	...	1635	6373	3728	1108	1609	547
1893	220,551	...	1638	6612	4061	1145	1569	610
Average of the ten years 1893-1902.	233,042	...	1918	6730	4201	1244	1700	652

* Retrospective estimate based upon Census Return of April, 1901.

Estimates for years 1893—1899 based upon hypothesis that rate of increase between 1881 and 1891 had continued during succeeding decennium.

† The returns of Marriages, from June 1899 onwards, are for the entire municipal area—the new Parish of Nottingham: prior to this, they did not include those of Bulwell, Basford, and North Wilford.

TABLE II.

Nottingham. Annual Rates for 1903, and the 10 years 1893-1902.

	Rate per 1000 of Population.		Per 1000 Births. Deaths under 1 year.	Per 1000 of Total Deaths.		
	Birth Rate.	Death Rate.		Deaths under 1 year.	Deaths under 5 years.	Deaths in Public Institutions.
1903	28·3	16·5	165	282	391	194
1902	27·8	16·7	159	267	336	190
1901	28·3	18·1	196	306	408	182
1900	28·3	19·2	196	288	398	169
1899	28·8	19·6	213	313	417	168
1898	28·8	17·2	178	298	416	157
1897	28·9	18·4	202	318	437	137
1896	29·4	17·5	168	278	418	145
1895	29·7	18·5	189	302	391	139
1894	28·6	16·7	174	336	432	147
1893	30·2	18·4	172	282	386	150
Average of the ten years 1893-1902.	28·88	18·03	184	299	403	158

TABLE III.

Schedule A—Nottingham. 1903. Deaths Registered from all causes.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
1	Small-pox														
	(a) Vaccinated	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(b) Unvaccinated	..	..	1	..	..	..	1	..	..	..	..	..	..	2
	(c) No Statement	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Measles	27	65	5	1	..	..	..	..	..	..	..	..	..	98
3	Scarlet Fever ..	1	14	10	3	3	3	..	..	..	..	..	..	..	34
4	Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Epidemic Influenza	1	2	1	..	1	..	2	2	3	1	2	3	..	18
6	Whooping Cough	49	39	2	..	..	..	..	..	..	..	..	..	..	90
7	Diphtheria ..	1	24	31	3	1	..	..	..	..	..	..	..	..	60
8	Enteric Fever ..	..	1	4	6	3	4	9	5	2	1	1	..	..	36
9	Asiatic Cholera ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Diarrhoea, Dysentery	80	12	..	..	..	1	1	..	1	2	1	3	..	101
11	Epidemic Enteritis	53	9	1	..	..	..	..	..	1	..	1	..	..	65
12	Chicken Pox ..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
13	Hydrophobia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Glanders ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Tetanus ..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
16	Anthrax ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17	Cowpox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Syphilis ..	17	..	..	..	..	..	..	1	..	..	..	..	..	18
19	Gonorrhœa ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Phagedæna ..	..	..	1	..	..	..	..	1	..	1	..	1	..	4
21	Erysipelas ..	1	..	..	..	1	..	..	..	..	2	..	..	..	4
22	Puerperal Fever ..	..	..	..	..	1	2	7	3	..	..	..	..	..	13
23	Pyæmia ..	6	..	..	3	..	1	4	1	3	3	1	..	..	22
24	Infective Endocarditis	..	..	..	..	..	..	..	1	2	..	..	..	..	3
25	<i>Other Allied Diseases</i> ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26	Malarial Fever ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
27	Rheumatic Fever ..	..	..	1	4	1	1	3	5	2	..	1	..	..	18
28	Rheumatism of Heart	..	..	1	..	..	..	..	..	..	..	..	..	..	1
29	Tuberculosis of Brain	5	18	4	..	..	..	1	1	3	..	..	..	..	32
30	Tuberculosis of Larynx	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31	Phthisis ..	7	9	1	8	19	32	67	74	48	30	6	1	..	302
32	Abdominal Tuberculosis	19	12	3	3	1	1	3	..	1	..	..	..	..	43
33	General Tuberculosis	5	4	2	1	1	3	1	2	2	..	..	..	..	21
34	Other forms Tuberculosis	3	2	1	2	2	1	2	..	1	2	..	..	..	16
35	<i>Other Infective Diseases</i> ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Thrush ..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
37	Actinomycosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
38	Hydatid Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..
39	Scurvy ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
40	<i>Other Diseases due to</i> <i>Altered Food</i> ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
41	Acute Alcoholism ..	..	..	..	..	..	..	2	1	2	..	..	..	..	5
42	Chronic Alcoholism ..	..	..	..	..	..	..	2	8	7	3	..	..	..	20
43	<i>Chronic Industrial</i> <i>Poisonings</i> ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	TOTALS ..	280	212	68	34	34	49	105	105	80	43	16	8	..	1034

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
44	<i>Other Chronic Poisonings</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45	Myxœdema ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
46	Addison's Disease ..	..	..	..	..	..	..	1	2	..	..	..	..	..	3
47	Osteo-arthritis ..	..	..	..	1	..	..	..	..	1	1	2	1	..	6
48	Gout ..	..	..	..	..	..	..	..	2	..	2	..	..	..	4
49	Cancer ..	..	..	..	..	..	1	5	30	50	47	45	14	..	192
50	Diabetes Mellitus ..	..	..	1	1	..	3	1	2	2	11	3	3	..	27
51	Purpura Hæmorrhagica	1	..	..	..	..	1	..	..	..	1	..	..	..	3
52	Hæmophilia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
53	Anæmia ..	..	2	..	..	..	..	..	1	..	6	..	..	..	9
54	Lymphadenoma ..	..	..	1	..	..	..	..	..	1	..	2	..	..	4
55	Premature Birth ..	143	..	..	..	..	..	..	..	..	..	..	..	..	143
56	Injury at Birth ..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
57	Debility at Birth ..	106	..	..	..	..	1	..	..	..	..	..	..	..	107
58	Atelectasis ..	19	1	..	..	..	..	..	..	..	..	..	..	..	20
59	<i>Congenital Defects</i> ..	27	1	..	..	..	..	..	..	..	..	..	..	..	28
60	Ectopia ..	1	..	..	..	..	..	1	..	..	..	..	..	..	2
61	Want of Breast Milk ..	13	..	..	..	..	..	..	..	..	..	..	..	..	13
62	Atrophy, Debility, Marasmus ..	110	5	..	..	..	..	..	..	..	..	..	..	..	115
63	Dentition ..	12	3	..	..	..	..	..	..	..	..	..	..	..	15
64	Rickets ..	8	8	..	..	..	..	..	..	..	..	..	..	..	16
65	Old Age, Senile Decay ..	..	..	..	..	..	..	..	..	..	6	77	146	44	273
66	Convulsions ..	73	9	..	..	..	..	..	1	..	..	..	..	..	83
67	Meningitis ..	17	20	3	3	..	..	..	1	..	1	..	..	..	45
68	Encephalitis ..	5	1	..	..	..	..	1	..	..	..	..	..	..	7
69	Apoplexy ..	1	1	..	1	..	..	2	7	10	29	39	25	3	118
70	Softening of Brain ..	..	..	..	..	..	1	..	..	4	8	6	2	..	21
71	Hemiplegia ..	..	1	..	..	..	..	..	..	5	8	16	8	2	40
72	Genrl. Paralysis of Insane ..	..	..	..	..	..	..	3	9	7	2	..	1	..	22
73	Other forms of Insanity ..	..	..	..	..	..	..	1	1	1	..	1	..	..	4
74	Chorea ..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
75	Cerebral Tumour ..	..	1	..	2	..	..	2	2	2	..	..	..	..	9
76	Epilepsy ..	..	1	..	..	2	2	4	4	1	4	2	2	..	22
77	Laryngismus Stridulus ..	1	2	..	..	..	..	..	..	..	..	..	..	..	3
78	Locomotor Ataxy ..	..	..	..	..	..	..	1	..	2	3	1	..	..	7
79	Paraplegia ..	..	..	..	..	..	..	..	1	1	1	7	..	..	10
80	Hydrocephalus ..	..	3	..	..	..	..	..	..	..	..	..	..	..	3
81	<i>Other forms, Brain Diseases</i> ..	..	..	..	..	..	..	..	..	3	1	3	2	..	9
82	Paralysis Agitans ..	..	..	..	..	..	..	..	..	..	1	..	2	..	3
83	Peripheral Neuritis ..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
84	Otitis ..	2	3	1	2	2	1	..	2	..	..	..	..	..	13
85	Disease of Nose, Epistaxis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
86	Diseases of Eye ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
87	Pericarditis ..	..	1	3	..	..	..	..	..	1	..	1	..	..	6
88	Endocarditis ..	..	1	2	4	9	8	11	25	21	23	15	8	1	128
89	Hypertrophy of Heart ..	..	..	..	..	1	..	..	1	..	3	2	..	..	7
90	Angina Pectoris ..	..	..	..	..	..	..	..	2	2	5	3	1	..	13
91	Aneurism ..	..	..	..	..	..	..	..	1	..	1	1	1	..	4
92	Senile Gangrene ..	..	..	..	..	..	..	..	..	..	2	4	2	1	9
93	Embolism, Thrombosis ..	1	..	..	1	..	..	..	3	..	3	1	2	..	11
94	Phlebitis ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
95	Varicose Veins ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
	TOTALS ..	542	64	11	15	14	18	34	95	117	169	235	222	51	1587

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
96	<i>Other Diseases, Heart</i> [and Vessels]	..	1	1	..	2	2	4	11	13	42	58	32	5	171
97	Rupture of Heart ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
98	Laryngitis ..	5	5	..	..	..	..	..	..	..	..	1	..	..	11
99	Croup ..	..	5	..	..	..	..	..	..	..	..	..	..	..	5
100	<i>Other Diseases, Larynx</i> [and Trachea]	..	..	..	..	..	..	..	..	1	..	1	2	..	4
101	Acute Bronchitis ..	90	37	2	..	..	3	3	2	10	24	57	30	10	268
102	Chronic Bronchitis ..	..	..	..	..	1	..	..	3	8	26	41	16	..	95
103	Lobar Pneumonia ..	19	15	4	..	..	..	3	5	10	9	3	1	1	70
104	Lobular Pneumonia ..	74	46	4	1	..	..	..	2	3	4	7	1	..	142
105	Pneumonia ..	44	21	3	..	3	1	10	8	10	14	14	2	2	132
106	Emphysema, Asthma ..	..	..	..	..	..	..	..	..	1	1	2	..	..	4
107	Pleurisy ..	..	2	..	..	1	1	..	5	1	1	1	..	..	12
108	<i>Other Diseases, Respira-</i> [tory System]	1	..	..	..	..	..	2	..	..	..	1	1	..	5
109	Bronchiectasis ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
110	<i>Diseases of Mouth and</i> <i>Annexa..</i>	..	..	1	..	..	..	..	..	..	..	..	..	..	1
111	Diseases of Pharynx ..	..	1	1	..	1	1	..	1	..	..	..	..	..	5
112	Diseases of Œsophagus ..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
113	Ulcer of Stomach and Duodenum ..	1	..	1	2	3	1	6	4	3	1	1	..	..	23
114	Other Diseases of Stomach ..	17	1	1	1	..	..	..	2	..	2	5	1	..	30
115	Enteritis ..	25	5	2	..	..	1	1	..	..	2	5	..	..	41
116	Appendicitis ..	..	1	4	3	..	3	2	2	2	..	..	..	..	17
117	Obstruction of Intestine ..	2	2	2	1	1	..	1	3	5	5	7	4	..	33
118	Other Diseases of Intestine ..	2	..	..	..	..	..	..	..	1	..	4	..	..	7
119	Cirrhosis of Liver ..	..	..	..	..	..	..	2	4	19	8	4	..	..	37
120	Other Diseases of Liver ..	1	..	..	..	..	..	1	3	1	..	2	1	..	9
121	Peritonitis ..	1	1	1	..	..	..	1	1	2	..	1	..	..	8
122	<i>Other Diseases, Digestive</i> <i>System ..</i>	1	..	..	..	1	..	..	1	..	1	..	..	..	4
123	<i>Diseases, Lymphatic Sys-</i> <i>tem and Glands ..</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..
124	Leucocythemia ..	..	..	..	..	..	1	2	..	..	..	..	..	..	3
125	Goitre ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
126	Acute Nephritis ..	4	9	1	1	1	1	..	3	3	1	2	1	..	27
127	Bright's Disease..	..	1	1	..	1	2	6	6	12	15	16	3	..	63
128	Calculus ..	..	1	..	..	..	..	..	..	2	..	3	..	..	6
129	Diseases of Bladder and Prostate ..	..	..	..	..	..	..	..	..	..	..	7	3	2	12
130	<i>Other Diseases, Urinary</i> <i>System ..</i>	..	..	..	..	..	..	..	1	..	3	..	..	..	4
131	Diseases of Testis & Penis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
132	Diseases of Ovaries ..	..	..	..	..	..	..	..	..	1	..	..	..	1	2
133	Diseases of Uterus and Appendages ..	..	..	..	..	..	1	3	..	2	..	..	1	..	7
134	Diseases of Vagina and External Genitals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
135	Diseases of Breast ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
136	Abortion, Miscarriage ..	..	..	..	..	..	1	4	..	..	..	..	..	..	5
137	Puerperal Mania ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
138	Puerperal Convulsions ..	..	..	..	..	1	..	3	1	..	..	..	..	..	5
139	Placenta Prævia, Flooding ..	..	..	..	..	..	..	3	3	..	..	..	..	..	6
TOTALS ..		287	154	29	9	16	19	58	72	110	160	245	99	21	1279

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
140	Puerperal Thrombosis ..	..	..	..	..	..	2	1	..	..	..	..	..	..	3
141	Other Diseases, Pregnancy [and Childbirth	..	..	..	..	..	..	1	2	..	..	..	..	..	3
142	Extra Uterine Pregnancy	..	..	..	..	..	..	1	..	..	..	..	..	..	1
143	Arthritis, Ostitis, Periostitis	..	1	..	..	..	..	..	..	..	..	..	..	..	1
144	Other Diseases, Osseous [System	..	1	1	..	..	..	..	..	..	..	..	..	..	2
145	Ulcer, Bedsore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
146	Eczema ..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
147	Pemphigus ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
148	Other Diseases, Integu- [mentary System	1	..	..	..	..	..	..	..	..	..	..	..	..	1
149	Herpes Zoster ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
<i>Accidents and Negligence:</i>															
150	In Mines and Quarries..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
151	In Vehicular Traffic ..	..	..	3	..	..	..	..	2	1	1	..	..	..	7
152	On Railways ..	..	..	..	..	..	..	1	2	..	..	..	..	..	3
153	On Ships, Boats, &c. (not drowning) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
154	In Building Operations	..	..	..	..	..	..	..	..	1	..	..	..	..	1
155	By Machinery ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
156	By Weapons & Implements	..	..	..	..	..	..	..	..	..	..	..	..	..	..
157	Burns and Scalds ..	1	7	5	..	..	..	1	..	..	..	..	..	..	14
158	Poisons, poisonous vapours	1	..	1	..	..	..	1	..	1	2	1	..	..	7
159	Surgical Narcosis ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
160	Effects of Electric Shock	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161	Corrosions by Chemicals	..	..	..	..	..	..	..	..	..	..	..	..	..	..
162	Drowning ..	..	4	..	..	1	1	2	3	..	..	..	..	..	11
163	Suffocation, Overld. in Bed	13	..	..	..	..	..	..	..	..	..	..	..	..	13
164	" Otherwise ..	7	..	..	..	..	..	..	..	..	..	..	..	..	7
165	Falls not specified ..	..	1	1	1	1	1	1	..	8	2	4	2	..	22
166	Weather Agencies ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
167	Otherwise, not stated ..	1	..	1	..	..	..	1	1	..	..	..	..	..	4
168	Homicide ..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
<i>Suicides:—</i>															
169	By Poison ..	..	..	..	..	..	1	..	..	1	2	..	..	..	4
170	By Asphyxia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
171	By Hanging & Strangulatn.	..	..	..	..	..	1	2	1	4	3	1	..	..	12
172	By Drowning ..	..	..	..	1	2	..	1	2	..	1	..	..	..	7
173	By Shooting ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
174	By Cut or Stab ..	..	..	..	..	..	..	..	2	1	3	1	..	..	7
175	By Precipitation from Elevated Places ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
176	By Crushing ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
177	By other and unspecified methods ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
178	Execution ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
179	Sudden Death, cause not ascertained [fied causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..
180	Ill defined and unspeci-	..	..	..	..	..	..	..	..	..	..	..	..	..	..
181	Uncertified ..	10	1	1	..	..	1	1	1	..	4	4	1	1	25
TOTALS, Page 10 ..		35	16	13	3	4	7	16	17	17	18	12	4	1	163
TOTALS, Page 9 ..		287	154	29	9	16	19	58	72	110	160	245	99	21	1279
TOTALS, Page 8 ..		542	64	11	15	14	18	34	95	117	169	235	222	51	1587
TOTALS, Page 7 ..		280	212	68	34	34	49	105	105	80	43	16	8	..	1034
GRAND TOTALS ..		1144	446	121	61	68	93	213	289	324	390	508	333	73	4063

Schedule B.—Nottingham. 1903. Deaths Registered from all causes

No.	Causes of Death.	All Ages.	Under 1	1—5	5—15	15—25	25—65	65 & up-wards.	In Public Institutions
1	Small-pox	2	..	1	..	..	1	..	2
2	Measles	98	27	65	6	..	..	..	4
3	Scarlet Fever	34	1	14	13	6	..	..	7
4	Typhus Fever .. .. .	..	..	..	..	..	..	..	..
5	Epidemic Influenza	18	1	2	1	1	8	5	1
6	Whooping-cough	90	49	39	2	..	..	..	2
7	Diphtheria, Membranous Croup	60	1	24	34	1	..	..	17
8	Croup .. .. .	..	..	..	..	..	..	..	..
9	Enteric Fever	36	..	1	10	7	17	1	13
10	Asiatic Cholera .. .. .	..	..	..	..	..	..	..	..
11	Diarrhœa, Dysentery	101	80	12	..	1	4	4	3
12	Epidemic or Zymotic Enteritis	65	53	9	1	..	1	1	3
13	Enteritis	41	25	5	2	1	3	5	..
14	Chicken-pox	1	1	..	..	..	..	..	..
15	<i>Other continued Fevers</i> .. .. .	..	..	..	..	..	..	..	..
16	Erysipelas	4	1	..	..	1	..	2	1
17	Puerperal Fever	13	..	..	..	3	10	..	3
18	<i>Other septic diseases</i> .. .. .	..	..	..	..	..	..	..	..
19	Intermittent Fever and Malarial Cachexia .. .. .	..	..	..	..	..	..	..	..
20	Tuberculosis of Meninges .. .. .	..	..	..	..	..	..	..	..
21	Tuberculosis of Lungs	302	7	9	9	51	219	7	66
22	Other forms of Tuberculosis	16	3	2	3	3	5	..	6
23	Alcoholism	25	..	..	..	..	25	..	5
24	Cancer	192	..	..	..	1	132	59	40
25	Premature Birth	143	143	..	..	..	..	..	1
26	Developmental Diseases	163	162	1	..	..	..	..	2
27	Old Age	273	..	..	..	..	6	267	102
28	Meningitis	45	17	20	6	..	2	..	..
29	Inflammation and Softening of Brain	186	6	3	1	1	74	101	37
30	Organic Diseases of Heart	171	..	1	1	4	70	95	49
31	Acute Bronchitis	268	90	37	2	3	39	97	16
32	Chronic Bronchitis	95	..	..	..	1	37	57	21
33	Lobar (Croupous) Pneumonia	70	19	15	4	..	27	5	6
34	Lobular (Broncho) Pneumonia	142	74	46	5	..	9	8	15
35	Diseases of Stomach	53	18	1	5	4	18	7	10
36	Obstruction of Intestines	33	2	2	3	1	14	11	12
37	Cirrhosis of Liver	37	..	..	..	..	33	4	4
38	Nephritis and Bright's Disease	90	4	10	3	5	46	22	21
39	Tumours and other Affections of Female Genital Organs	9	..	..	..	1	6	2	6
40	Accidents and Diseases of Parturition	19	..	..	..	4	15	..	1
41	Deaths by Accident or Negligence	91	23	12	12	4	33	7	26
42	Deaths by Suicide	31	..	..	1	4	24	2	2
43	Deaths from Ill-defined Causes .. .. .	..	..	..	..	..	..	..	..
44	All other Causes	1046	337	115	58	53	338	145	153
	ALL CAUSES	4063	1144	446	182	161	1216	914	659

TABLE IV.

Nottingham, 1903. Deaths and Death-Rates from certain groups of Diseases.

A. All Ages.	Deaths.	Deaths per 1000 of the population.	Deaths per 1000 total Deaths.
1. Principal Epidemic Diseases ...	504	2·05	124
2. Pulmonary Diseases	729	2·96	179
3. Tuberculous Diseases	414	1·68	102
B. Infants under 1 year of Age.	Deaths.	Deaths per 1000 Births.	Deaths per 1000 Deaths under 1 year.
4. Wasting Diseases ...	372*	53·6	325
5. Convulsive Diseases	102	14·7	89

NOTES.

1. Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping-Cough, Typhus, Enteric, and Simple Continued Fevers, and Diarrhœa.
2. Includes all Respiratory Diseases except Phthisis (Consumption).
3. Includes Phthisis, Scrofula, Tuberculosis, and Tabes Mesenterica.
4. Includes Marasmus, Atrophy, Wasting, Debility, Inanition, Premature Birth, and Improper Feeding.
5. Includes Infantile Meningitis, Convulsions, and Dentition.

* The increase in this total, as compared with the figures of previous years, is due in great measure to changes in classification.

Nottingham. Deaths from the Principal Zymotic Diseases in the ten years 1893-1902, and in the Year 1903.

TABLE V.

DISEASE.	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	Ten Years, 1893-1902.		1903.	
											Annual Average.	Proportion of Deaths to 1000 Deaths.	Deaths.	Proportion of Deaths to 1000 Deaths.
Small-pox	4	4	..	..	..	..	..	..	..	..	0·8	..	..	..
Measles	25	134	1	203	49	104	140	45	96	4	80·1	..	98	..
Scarlet Fever	83	49	50	27	34	33	53	55	11	23	41·8	..	34	..
Diphtheria	15	22	11	12	21	23	30	28	29	31	22·2	..	60	..
Whooping-Cough	59	119	33	91	117	59	55	103	96	37	76·9	..	90	..
FEVERS. { Typhus Enteric Simple Continued .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	68	61	55	75	45	54	114	75	79	50	67·6	..	36	..
	1	..	..	..	1	1	4	1	1	..	0·9	..	..	..
Diarrhoea	361	152	444	177	530	385	600	387	361	194	359·1	..	166	..
TOTAL	616	541	594	585	797	659	996	694	673	339	649·4	151·0	504	82·32
TOTAL, LONDON	13,223	11,549	11,544	14,100	11,525	12,565	11,228	10,136	10,203	10,393	11,646	139·5	8,166	125·91
TOTAL, ENGLAND & WALES	73,499	52,771	64,901	66,936	67,051	69,714	69,820	64,059	66,531	53,795	64,907	117·6	49,150	100·16

Birth-Rate, Death-Rate, Infantile Death-Rate, and Death-Rate from Zymotic Diseases and Phthisis.

(REGISTRAR-GENERAL.)

I. NOTTINGHAM.

In five yearly periods, 1856—1890, and in single subsequent years.

	Birth-Rate.	Death-Rate.	Infantile Death-Rate	DEATH-RATE FROM								
				7 Princp. Zymotic Diseases.	Small- Pox.	Measles.	Scarlet Fever.	Diph- theria.	Whooping Cough.	"Fever."	Diarrhoea	Phthisis and other Tuberculous Diseases.
1856—1860	36.8	27.2	209	5.98	0.21	0.80	1.08	0.13	0.76	1.02	2.00	3.22
1861—1865	34.8	24.9	192	3.83	0.09	0.43	0.98	0.12	0.51	0.78	1.09	3.19
1866—1870	31.3	23.8	200	4.34	0.07	0.44	0.73	0.09	0.51	0.92	1.57	2.78
1871—1875	34.1	24.9	192	4.30	0.79	0.31	0.53	0.02	0.26	0.84	1.53	2.42
1876—1880	34.6	21.7	175	3.00	0.00	0.35	0.62	0.03	0.43	0.34	1.06	1.85
1881—1885	36.6	20.9	174	3.22	0.06	0.41	0.77	0.12	0.46	0.31	1.09	1.99
1886—1890	30.4	17.9	168	2.39	0.01	0.42	0.11	0.06	0.45	0.31	1.04	1.52
1891	29.8	19.5	169	2.49	0.00	0.51	0.13	0.09	0.56	0.32	0.84	1.69
1892	29.4	18.4	167	2.33	0.00	0.55	0.19	0.13	0.54	0.16	0.73	1.42
1893	30.2	18.4	172	2.62	0.02	0.11	0.37	0.07	0.27	0.31	1.47	1.81
1894	28.6	16.7	174	2.42	0.01	0.60	0.23	0.08	0.53	0.28	0.60	1.80
1895	29.7	18.5	189	2.64	..	0.00	0.23	0.04	0.14	0.24	1.97	2.10
1896	29.4	17.5	168	2.47	..	0.88	0.11	0.06	0.39	0.34	0.69	1.89
1897	28.9	18.4	202	2.81	..	0.21	0.15	0.09	0.49	0.21	1.66	1.88
1898	28.8	17.2	178	2.37	..	0.44	0.14	0.10	0.25	0.24	1.20	1.82
1899	28.9	20.0	210	3.33	..	0.58	0.23	0.13	0.23	0.48	1.68	1.67
1900	28.3	19.2	196	2.35	..	0.19	0.23	0.12	0.43	0.32	1.08	2.02
1901	28.4	18.5	193	2.86	..	0.41	0.05	0.12	0.42	0.35	1.51	1.80
1902	27.8	16.7	159	1.32	..	0.02	0.10	0.12	0.15	0.21	0.72	1.69
1903	28.3	16.5	165	2.05	0.01	0.39	0.14	0.26	0.39	0.14	0.68	1.68

II. ENGLAND AND WALES.

In five yearly periods, 1858—1890, and in single subsequent years.

	Birth-Rate.	Death-Rate.	Infantile Death-Rate	7 Princp. Zymotic Diseases.	Small- Pox.	Measles.	Scarlet Fever.	Diph- theria.	Whooping Cough.	"Fever."	Diarrhoea	Phthisis and other Tuberculous Diseases.
1858—1860	34.3	22.2	153	4.03	0.22	0.48	0.89	0.37	0.49	0.79	0.78	2.57
1861—1865	35.1	22.6	151	4.22	0.22	0.46	0.98	0.25	0.52	0.92	0.87	2.53
1866—1870	35.3	22.4	159	4.08	0.10	0.43	0.96	0.13	0.55	0.85	1.06	2.45
1871—1875	35.5	22.0	153	3.76	0.41	0.37	0.76	0.12	0.50	0.60	1.00	2.22
1876—1880	35.4	20.8	144	2.94	0.01	0.39	0.68	0.12	0.53	0.38	0.83	2.04
1881—1885	33.4	19.3	139	2.32	0.01	0.41	0.43	0.16	0.46	0.27	0.65	1.82
1886—1890	31.4	18.9	145	2.25	0.01	0.46	0.24	0.17	0.44	0.20	0.66	1.63
1891	31.4	20.2	149	2.70	0.00	0.43	0.17	0.17	0.46	0.16	0.46	1.60
1892	30.5	18.9	148	2.78	0.01	0.46	0.19	0.22	0.45	0.14	0.50	1.47
1893	30.8	19.2	159	3.16	0.05	0.37	0.23	0.31	0.34	0.23	0.95	1.47
1894	29.6	16.6	137	2.25	0.02	0.39	0.16	0.29	0.41	0.16	0.36	1.38
1895	30.3	18.7	161	2.14	0.00	0.38	0.15	0.26	0.32	0.18	0.87	1.40
1896	29.7	17.1	148	2.18	0.02	0.56	0.18	0.29	0.41	0.17	0.55	1.31
1897	29.7	17.4	156	2.15	0.00	0.40	0.14	0.24	0.35	0.16	0.86	1.34
1898	29.4	17.6	161	2.22	0.01	0.41	0.11	0.24	0.31	0.18	0.96	1.32
1899	29.3	18.3	163	2.21	0.01	0.31	0.12	0.29	0.30	0.20	0.98	1.34
1900	28.9	18.3	154	2.00	0.00	0.39	0.12	0.29	0.34	0.17	0.69	1.33
1901	28.5	16.9	151	2.05	0.01	0.27	0.13	0.27	0.30	0.16	0.91	1.26
1902	28.6	16.3	133	1.64	0.08	0.38	0.15	0.23	0.29	0.13	0.38	..
1903	28.4	15.4	132	1.46	0.02	0.27	0.12	0.18	0.27	0.10	0.50	..

Principal Vital Statistics of the 76 Greater English Towns for 1903
(taken from the Registrar-General's Quarterly Reports and
Annual Summary).

Populations estimated to middle of 1903 (from increase during
Decennium, 1891-1901).

	Populations estimated to middle of 1903	Birth- Rate.	Recorded Death- Rate.	Cor- rected Death Rate.	DEATH-RATES AT AGE PERIODS.			Death- Rate from seven principal epidemic diseases.	Percent- age of uncerti- fied Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
England & Wales	33,378,338	28·4	15·41	15·4	132	7·7	64·2	1·46	1·7
76 Large Towns ..	15,075,011	29·7	16·26	17·27	144	8·6	66·5	1·89	1·1
London	4,613,812	28·4	15·67	16·48	131	8·5	62·9	1·77	0·3
Croydon	141,157	26·3	11·83	12·14	108	5·6	52·7	1·08	—
Willesden	127,077	32·0	12·11	12·99	117	6·1	56·9	1·96	0·8
Hornsey	78,386	20·3	7·85	8·96	84	3·9	42·0	0·67	—
Tottenham ..	109,749	32·3	13·03	14·06	124	6·4	61·0	1·89	0·7
West Ham	231,894	33·7	15·26	16·32	146	7·9	64·8	2·65	0·3
East Ham	110,451	34·5	10·96	11·70	111	5·5	52·5	1·62	0·5
Leyton	107,153	30·6	10·80	11·12	103	5·3	44·7	1·64	1·3
Walthamstow ..	106,290	33·0	11·10	11·75	113	5·4	56·5	1·90	0·2
Hastings	66,194	18·3	12·89	12·41	106	5·9	57·5	0·69	0·7
Brighton	125,405	24·3	14·27	14·07	114	7·0	58·4	0·85	0·3
Portsmouth ..	194,960	27·9	14·75	15·13	114	7·6	62·4	1·50	1·0
Bournemouth ..	63,132	17·8	12·10	12·77	81	6·8	52·7	0·40	0·3
Southampton ..	110,120	28·2	13·78	13·71	116	6·6	60·1	1·31	—
Reading	75,082	27·0	12·71	13·17	121	6·3	53·3	0·94	1·7
Northampton ..	89,863	24·4	14·19	14·72	139	7·2	63·0	1·56	1·8
Ipswich	68,818	28·3	15·24	14·89	140	6·8	63·3	1·41	1·1
Great Yarmouth..	51,851	27·5	18·16	16·67	122	9·6	63·7	2·59	—
Norwich	114,251	27·9	15·23	14·57	150	6·1	65·6	1·13	1·4
Plymouth	112,022	25·5	16·51	16·09	144	8·0	66·6	1·16	0·4
Devonport	73,815	28·4	14·13	14·83	118	7·1	63·6	0·94	0·1
Bristol	338,895	27·4	14·28	14·67	116	7·4	60·4	1·08	0·5
Hanley	63,205	34·9	18·69	20·39	173	9·4	78·3	3·08	2·6
Burton-on-Trent..	51,450	26·5	12·32	13·25	93	6·2	69·9	0·54	0·5
Wolverhampton ..	96,947	30·5	15·54	16·09	141	7·7	65·0	1·97	0·6
Walsall	89,878	34·0	16·45	17·44	150	8·7	59·8	1·83	0·7
Handsworth	57,557	25·4	10·40	11·44	100	5·2	50·2	0·76	2·2
West Bromwich ..	66,558	34·6	16·81	16·97	159	8·5	55·5	2·36	1·8
Birmingham ..	533,039	31·8	17·78	19·13	159	9·3	74·0	2·32	2·3
Kings Norton ..	63,717	27·6	9·96	10·42	98	4·8	47·5	0·75	2·1
Smethwick	58,787	33·7	13·48	14·74	140	6·3	64·0	1·08	3·4
Aston Manor	79,417	28·7	13·89	15·41	161	6·6	62·4	2·27	1·5
Coventry	72,684	29·8	16·17	16·20	113	8·4	73·1	1·99	1·5
Leicester	220,272	27·4	14·21	15·18	160	6·7	60·4	1·46	1·2
Grimsby	65,772	28·8	14·19	15·19	167	6·8	55·5	1·94	1·6

Principal Vital Statistics of the 76 Greater English Towns for 1903—*continued*.

		Populations estimated to middle of 1903.	Birth- Rate.	Recorded Death- Rate.	Cor- rected Death Rate.	DEATH-RATES AT AGE PERIODS.			Death- Rate from seven principal epidemic diseases,	Percent- age of uncerti- fied Deaths.
						Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
Nottingham	..	245,985	28·3	16·93	17·84	165	8·4	66·7	2·01	0·7
Derby	..	118,707	27·2	13·59	14·65	128	6·6	66·5	0·87	—
Stockport	..	95,709	29·3	18·45	19·91	185	9·7	65·5	2·33	0·2
Birkenhead	..	113,598	30·8	16·76	17·89	156	8·6	68·1	2·07	0·5
Wallasey	..	58,258	27·6	13·86	15·18	115	7·1	71·5	1·28	1·4
Liverpool	..	716,810	33·4	20·48	21·91	159	11·6	78·3	2·51	3·4
Bootle	..	60,761	33·0	19·04	21·04	165	10·0	87·0	2·71	3·9
St. Helens	..	87,259	38·8	17·71	19·20	142	9·5	78·7	1·88	6·7
Wigan	..	62,165	35·5	22·16	24·47	180	12·9	81·2	4·18	0·8
Warrington	..	66,370	36·2	18·67	20·15	153	10·6	71·1	3·29	4·9
Bolton	..	173,401	27·0	17·46	19·76	152	9·8	82·8	1·99	0·3
Bury	..	58,313	22·7	17·32	19·41	165	9·2	78·8	2·16	1·6
Manchester	..	553,486	32·1	19·72	22·03	169	11·1	78·8	2·54	1·4
Salford	..	226,480	32·3	18·97	20·97	167	10·7	72·8	2·86	0·6
Oldham	..	138,786	25·6	18·62	20·96	160	10·9	75·4	2·34	0·1
Rochdale	..	84,824	24·0	17·15	18·97	141	9·5	79·6	1·36	2·2
Burnley	..	99,469	27·2	19·16	21·62	217	9·8	80·2	2·82	0·9
Blackburn	..	131,218	25·1	15·53	17·79	157	7·9	78·2	1·49	2·6
Preston	..	114,404	30·4	18·68	20·45	161	9·8	79·8	3·09	2·4
Barrow-in-Furness	..	59,009	33·3	12·73	14·48	97	6·7	70·3	0·85	4·7
Huddersfield	..	94,963	23·8	16·73	17·97	120	9·0	79·9	0·84	0·8
Halifax	..	106,754	21·1	15·02	16·30	122	7·5	78·6	0·72	1·5
Bradford	..	283,412	23·3	16·39	18·12	148	8·5	78·5	1·36	0·7
Leeds	..	443,559	29·4	16·56	18·08	153	8·8	69·9	1·76	0·4
Sheffield	..	425,528	33·2	18·62	20·08	182	9·6	71·0	3·10	2·6
Rotherham	..	57,212	34·5	17·63	18·27	181	8·7	65·6	2·94	3·0
York	..	80,186	29·3	16·27	16·75	156	8·3	58·6	1·97	0·2
Hull	..	249,639	31·3	16·92	17·33	162	8·7	62·3	2·19	1·4
Middlesbrough	..	95,013	36·6	21·53	23·46	186	12·3	69·6	2·97	2·2
Stockton-on-Tees	..	51,965	31·7	16·00	16·77	137	8·7	64·7	1·29	1·0
West Hartlepool	..	67,201	33·9	14·29	15·68	129	7·8	61·9	0·80	0·6
Sunderland	..	149,572	35·1	19·94	20·56	157	11·2	71·6	2·37	2·7
South Shields	..	105,325	34·5	17·18	18·20	131	9·4	80·8	1·09	5·3
Gateshead	..	115,531	35·8	16·73	17·64	159	8·2	68·7	1·87	4·6
Newcastle-on-Tyne	..	222,241	31·1	19·22	20·73	165	10·8	75·6	1·22	0·5
Tynemouth	..	52,531	32·9	18·17	18·76	162	9·7	61·6	1·42	1·6
Newport (Mon.)	..	70,217	32·4	15·71	17·00	146	8·0	68·8	1·74	0·4
Cardiff	..	172,593	30·5	13·99	15·22	122	7·7	63·5	1·32	0·1
Rhondda	..	119,652	41·1	16·56	18·22	158	8·3	65·6	2·46	0·7
Merthyr Tydfil	..	71,651	38·4	19·07	20·20	154	10·3	68·5	2·66	0·4
Swansea	..	95,489	32·0	18·59	19·95	165	9·7	71·7	2·30	0·6

The City of Nottingham.

SITE and POPULATION DATA, and RATEABLE VALUE.

1903.

Situation and Soil.—Nottingham lies in lat. 52 deg. 57 min. north, and long. 1 deg. 9 min. west, in the S.W. portion of the county of Notts., and in the watershed of the Trent. It stretches about $7\frac{1}{2}$ miles north from the Trent, and has an average breadth of nearly four miles. It stands for the most part on Bunter sandstone; but on the east the Keuper marls appear; on the north and west, red marl and magnesian limestone of the Permian series; and on the south towards the Trent, and in the valley of the Leen and other small streams, are found the alluvium and gravels of the Trent and its local tributaries.

Area and Altitude.—The City has an area of 10,935 acres, and its altitude varies from about 80 feet (at Trent Bridge) to 425 feet (on Woodborough Road) above ordnance datum (mean water level at Liverpool).

Population: At census of 1881, 186,575; at census of 1891, 213,877; at census of 1901, 239,753.

Average number of persons to each house:—At census of 1881, 4·8; at census of 1891, 4·6; at census of 1901, 4·5.

Average number of persons to an acre, 22.

Rateable Value, £1,154,078 (for Poor Law purposes).

GENERAL VITAL STATISTICS.

Population.—The estimated population of the City at the middle of 1903 (estimated as usual on the assumption that the proportioned annual rate of increase which obtained during the last intercensal period has continued since the census of 1901) amounted to 245,985.

In my Report for 1902 I gave some particulars of the Census Return of 1901 for the City of Nottingham, with the principal conclusions to be drawn from it. I will here therefore only remind you of a few salient facts connected with it.—The increase of population in the City during the 10 years, 1891—1901, amounted to 25,866—equal to a little over 1 per cent. per annum. The increase of males during the 10 years was about 2 per cent. greater than that of the females. The ratio of males to females in the City population at the census of 1901 was as 100 to 114·6. At the census of 1891 it was as 100 to 120. This diminution in the excess of females over males, which is most marked in the age-period covering the working years of life, is probably explained by a lessened demand for female labour in local industries. The ratio of males to females in the general population of England and Wales is as 100 to 106·7 (1901).

The Local Census Return contains some incidental information respecting the actual and relative numbers of different classes of tenements in this district, to

which I am tempted to refer once again, on account of the special interest attaching to the housing problem in popular estimation at the present time. We are told that—

“The total number of separate Tenements in the Administrative County, together with the City and County Borough of Nottingham, which had been 96,450 in 1891, rose to 113,144 in 1901, the increase being equal to 17·3 per cent. Of this total, the Tenements containing five or more rooms increased from 62,642 to 77,122, equal to 23·1 per cent. ; while those with fewer than five rooms increased from 33,808 to 36,022, or 6·5 per cent. Stated in another way, the Tenements with five or more rooms were equal to 64·9 per cent. of the Total Tenements in 1891, and increased to 68·2 per cent. at the recent Census, while the percentage of the Tenements with fewer than five rooms declined from 35·1 to 31·8.”

At the time of the Census of 1901 the total number of tenements in the City of Nottingham was 53,389, and of these 18,034 contained less than 5 rooms each, these last being made up as follows:—
(*a*) 1-room tenements, 481; (*b*) 2-room tenements, 1,795; (*c*) 3-room tenements, 6,826; (*d*) 4-room tenements, 8,932.

These facts, with others of similar import recorded in earlier returns, clearly indicate a growing improvement in the conditions under which the poor are housed, and, while they are certainly not sufficient in themselves to justify us in resting content with the present order or rate of progress, they still shew that, even without special effort or that amendment of statutory powers for which there is now so universal a demand, there is and has been for some time past a continuous movement in the right direction resulting mainly from the routine administration of existing Public Health Statutes.

Marriages.—Since the unification of the city area for all purposes of local government in the spring of 1899, it has been possible to obtain an exact record of all marriages taking place within the city.

The totals for each of the 4 years which have elapsed since the above date have been as follows:—

1900.	1901.	1902.	1903.
2,153.	2,255.	2,256.	2,287.

The increase of 102 between 1900 and 1901 was comparatively satisfactory, but a stationary figure between 1901 and 1902, and an advance of only 31 in the total for 1903 as compared with that of the year before, are certainly far from satisfactory, and afford confirmative evidence—if such were needed—of existing trade depression.

The following table gives the numbers of marriages during each quarter of 1903, in churches, in chapels, and before Registrars respectively:—

Nottingham.
Marriages in Year 1903.

	Qr. I.	Qr. II.	Qr. III.	Qr. IV.	TOTAL.
Churches	208	412	376	403	1399
Chapels	9	31	34	22	96
Registrars	164	203	196	229	792
	381	646	606	654	2287

Of the increase of 31 marriages during 1903, as compared with 1902, no less than 27 were among those performed by Registrars. The increases in the Church and Chapel marriages were only 3 and 1 respectively.

The proportion of persons married to every 1,000 of the population was 18·6. The corresponding rate in London was 17·4, and in England and Wales as a whole 15·6, during 1903.

Births.—My record of births in Nottingham during 1903, prepared from the returns of local Registrars, was almost exactly identical with that of the Registrar-General, shewing a total of 6,943, as compared with his 6,945.

The corresponding total for 1902 (52 weeks) was 6,743. The figure for 1903 corresponds with a rate per 1,000 of 28·3, which is 0·5 above that for 1902 but identical with the rates for 1901 and 1900. Prior to 1902 the rate of 28·3, first reached in 1900, was the lowest on record. If we go back to 1884, when the population was more than 50,000 below the present figure, the births registered in the City amounted to 8,329, or no less than 1,384 more than last year, and the birth-rate was equal to 37 per 1,000 living.

The decline in the birth-rate, which is more or less general throughout the country (with notable local exceptions), is due to a growing disinclination on the part of parents to regard the production and rearing of offspring as the principal object of marriage. It is hardly necessary to point out that the practical outcome of such a mental attitude on the part of parents cannot fail to be injurious to the race. Apart from its moral influence, which though certainly not inconsiderable is too subtle to be at all exactly estimated, the diminished incentive to parental industry and the curtailment of the numbers competing in that race where the prizes go mainly to the swift and the strong, which are involved, cannot fail to diminish our chances of survival in the struggle for national existence.

The children born in Nottingham during 1903 consisted of 3,445 males and 3,498 females. Of the males 205 and of the females 194 were illegitimate.

The illegitimate births constituted 5·74 per cent. of all, as compared with 5·80 per cent. during 1902. This rate is approximately 1·8 per cent. above the general ratio for England and Wales.

The birth-rate of the 76 great towns of England and Wales during 1903 was equal to 29·7, that of London to 28·4, and that of England and Wales as a whole to 27·9. There is a marked decline in all these birth-rates as compared with those of the preceding year.

Deaths.—The total number of deaths during 1903 among persons normally resident in Nottingham was 4,063. This number corresponds with a crude death-rate per 1,000 living of 16·5. The death-rate for Nottingham furnished by the Registrar-General's return is 16·9.

In the Annual Summary of the Registrar-General, dealing with the vital statistics of London and the other large towns, a factor is furnished for each town, by the application of which to its recorded death-rate a figure is found representing what its rate of mortality would be were the age and sex constitution of its population identical with that of England and Wales as a whole.

The recorded death-rate of Nottingham (16·5) when multiplied by this factor (1·05) rises to 17·32.

There were 2,037 deaths of males and 2,025 of females during the year. The deaths of males correspond with a death-rate of 18·0, and those of females with one of 15·4.

The death-rate of males in England and Wales during 1903 was equal to 16·5 per 1,000, and that of females to 14·4.

There are now 76 towns of England and Wales, each containing 50,000 inhabitants and upwards, respecting which the Registrar - General furnishes periodical statistics. On this list Nottingham occupied during 1903 the fiftieth place from the lowest by its recorded, and the forty-sixth by its corrected death-rate. The City has therefore fallen 12 places on the recorded, and 8 places on the corrected list as compared with 1902. This retrogression is largely due to the fact that the decline in the infant mortality, resulting from a cool and wet summer season, has been less marked in Nottingham than elsewhere. Six of the great towns had corrected death-rates below 12 per 1000. These were Hornsey, Kings Norton, Leyton, Handsworth, East Ham, and Walthamstow. Six, again, had corrected death-rates over 21 per 1000. These were Bootle, Burnley, Liverpool, Manchester, Middlesboro, and Wigan. The mean corrected death-rate for the 76 towns during 1903 was 17·27, that for London 16·48, and that for England and Wales as a whole 15·41. The death-rate of children under 1 year in Nottingham (per 1000 births during the year) amounted to 165. This is a low figure for Nottingham, but is 6 above the corresponding figure for 1902, and no less than 21 above the mean figure for the 76 great towns. To put the fact in plain language, had the rate of mortality among infants under one year in Nottingham during 1903 been identical with the mean rate in the 76 great towns for the same period, the number of infantile deaths in the City would have been 146 less than they were. Nevertheless, if we compare the Nottingham rate for 1903 with the average Nottingham rate for the preceding 10 years, or with many rates for individual past years, we find that the comparison is greatly in favour of that for 1903. The mean rate for the 10 years 1893-1902 was 185, and during the 4 years, 1897, 1899, 1900, and 1901, the annual rate of infant mortality ranged from 196 to 213.

Among prominent infant death-causes, diarrhœa was less, and measles and whooping-cough considerably more in evidence than during 1902. The mortality from diarrhœa varies more or less directly with the temperature and degree of dryness of a season, but such is not the case with measles and whooping-cough. These diseases wax and wane at almost regular intervals, and the mortality from them during any particular period varies with their degree of prevalence in that period.

The infant death-rate of the 76 great towns was 144, of the 103 lesser towns 135, of England and Wales 132, of London 131, of England and Wales less the 179 towns 118, during 1903.

The deaths of illegitimate children under 5 years of age in Nottingham during 1903 numbered 91, and were only slightly less than twice as numerous proportionately as the legitimate.

The deaths of persons aged between 1 and 60 years during 1903 were equal to 8·4 per 1000 living within such age-period in Nottingham, 8·6 in the 76 great towns, 8·5 in London, and 7·7 in England and Wales.

The rate (per 1000 living) among persons aged 60 years and upwards during 1903 was 66·7 in Nottingham, 66·5 in the 76 towns, 62·9 in London, and 64·2 in England and Wales.

Registration Sub-Districts.—The position and areas of the registration sub-districts of the City are once more clearly defined upon the maps (between p.p. 50 and 51, and 60 and 61) shewing the distribution of enteric fever and diphtheria cases.

The areas have undergone no alteration during the past year; all local statistics therefore may be compared upon even terms with those of 1902.

I may once more call attention to the fact that, as far as practicable, all deaths and notifications of infectious sickness are now distributed, in this section and the accompanying table, to the districts to which they properly belong, instead of being entered, as formerly, direct from the sickness and death returns without such correction. The effect of this arrangement is to shew the incidence of infectious sickness and mortality as it would appear in the absence of hospitals and other public institutions.

I have, again, not attempted to form an estimate of the increase which has taken place in each of the sub-district populations since 1901, as, owing to the alterations that have recently been made in the areas of these sub-districts, it would be a very difficult matter to obtain a reliable basis for the formation of such an estimate.

All the rates given in this section are calculated upon the census population of 1901, and, therefore, though not entirely up-to-date, their approximate accuracy is guaranteed.

Births in Registration Sub-Districts. 1903.

District.	Legitimate.		Illegitimate.		Total of each Sex.		Total of both Sexes.
	M.	F.	M.	F.	M.	F.	
Bulwell ..	641	675	56	45	697	720	1417
N.W... ..	758	759	35	27	793	786	1579
N.E.	837	862	44	60	881	922	1803
S.W.	556	509	29	29	585	538	1123
S.E.	448	499	41	33	489	532	1021
TOTALS ..	3240	3304	205	194	3445	3498	6943

The births in the Bulwell Sub-District are still fairly well maintained at a rate of 33·83 per 1000 of population—as calculated on the population figure for 1901. The rates in the other districts, similarly computed, are, 27·04 in N.W., 27·25 in N.E., 28·42 in S.W., and 30·34 in S.E. The mean of these is only 28·26. It must be remembered that these rates would be even lower than they are, could the actual present population of each division be utilized for their computation.

I have touched elsewhere upon the social, moral, and economic issues involved in the decline of the nation's birth-rate and the agencies by which it had been brought about. There is a fact, however, which comes home to one in studying the comparative birth-rates of different localities and different social sections of the community, which I have not yet mentioned but which is at once important and suggestive. It is, that, while the birth-rate appears to be declining among rich and poor alike in the denser and purely urban and many purely rural populations, it seems to be well maintained with but little reduction among certain, in some respects, more primitive working class sections of the community, especially those living in open suburban districts, and that these sections of the population, therefore, are producing better and more virile stock than others. The case of the Bulwell colliers is the best local example of this, but similar instances can be adduced from the mining and other industrial communities of such places as Gateshead, South Shields, Sunderland, Middlesboro', St. Helens, Wigan, Warrington, Liverpool, Manchester, Sheffield, Walsall, Rhondda, Merthyr Tydfil, and others.

The general death-rates were again very low in all the Sub-Districts except S.E. (20·5). But here, in all probability, the increase of population since 1901

(which I have not taken into account for lack of definite data) has been sufficient to explain the apparent rise in the rate. The death-rate of N.W. was 15.6, and the rates of Bulwell, N.E. and S.W., were practically identical at 16.6 and 16.7.

The infant death-rate (per 1000 births during the year) were once more, as already stated, comparatively low for this City, ranging from 15.6 in Bulwell and N.W., 15.9 in S.W., and 16.7 in N.E., to 19.4 in S.E., but here again an exceptional increase of population may possibly explain a great part of the excess above the mean.

The death-rates from the 7 principal epidemic disease of the Registrar-General were higher in all the Sub-Districts than during 1902, and this increase is almost entirely accounted for by the fact that whooping-cough and measles were again epidemic throughout the City during 1903, after a marked remission in the preceding year. These two diseases were very generally distributed over the City, taking the year as a whole, but relatively to population Bulwell and S.E. suffered most from measles and N.W. least, and Bulwell and S.E. again most and N.E. least from whooping-cough.

Diphtheria was less prevalent and less fatal in N.E. and S.E. than elsewhere in the City. Diarrhœa was strikingly less prevalent and fatal in the Bulwell Sub-District than in other parts of the City, and the same may be said of enteric fever in S.E.

Small-pox was very unevenly distributed, 101 out of the total of 152 cases coming from Bulwell and N.W.

The death-rates from phthisis per 1,000 of population were as follows:—Bulwell, 1.15; N.W., 1.13; N.E., 1.54; S.W., 1.01; S.E., 1.36.

The most striking alteration here, as compared with the previous year, is in N.E., where the deaths increased from 79 to 102. The phthisis rate in S.E. still remains relatively high, though less in 1903 than in 1902.

The mortality from cancer was less in all the Sub-Districts except S.W. than during 1902. The deaths in Bulwell were 19 as compared with 26 the year before, and in N.E. only 48 as compared with 76. The total number of deaths from cancer was 192, against 228 in 1902, and an annual average of 209 for the preceding 5 years. The Sub-District cancer death-rates were all well below 1.0 per 1000 excepting that of S.W. (1.2).

The Bulwell Sub-District still maintains its reputation as one of the healthiest parts of the City, but its bill of health was less clean than usual last year through an excessive incidence and mortality of measles, whooping-cough, and diphtheria, and excessive incidence of small-pox within its area.

NOTTINGHAM SUB-DISTRICTS.

Summary of Statistics for 1903.

The Deaths and the Notifications are distributed to the Districts to which they properly belong.

	Population.			Births.	Birth Rate.	Deaths.			Death Rates.				DEATHS FROM									Notified Cases of				
	Census.		Approximate Enumera- tion.			Total.	Under 1 year.	From 7 prin. Epidemic Diseases.	Total per 1000 of population.	Under 1 year per 1000 Births.	From 7 prin. Epidemic Diseases.	From Phthisis.	Small Pox.	Measles.	Scarlet Fever	Diphtheria.	Whooping Cough.	" Fever."	Diarrhoea.	Influenza.	Cancer.	Phthisis.	Small Pox.	Scarlet Fever	Diphtheria.	Enteric Fever.
	1881.	1891.																								
Bulwell ..	26,712	34,262	41,888	1417	33.83	696	221	90	16.6	156	2.15	1.15	1	25	4	14	23	8	15	1	19	48	55	212	88	51
N.W. ..	39,574	53,699	58,388	1579	27.04	910	246	98	15.6	156	1.68	1.13	..	12	7	15	24	10	30	2	47	66	46	304	132	49
N.E. ..	53,911	63,870	66,274	1803	27.25	1107	301	125	16.7	167	1.89	1.54	..	23	11	11	12	8	60	5	48	102	16	417	64	60
S.W. ..	26,080	32,072	39,510	1123	28.42	657	178	83	16.6	159	2.10	1.01	..	15	4	14	16	8	26	6	47	40	14	235	102	21
S.E. ..	40,295	29,974	33,692	1021	30.34	691	198	92	20.5	194	2.73	1.36	1	23	8	6	17	2	35	4	31	46	21	252	37	20
The whole } CITY ..	186,572	213,877	239,752	6943	28.96	4061	1144	488	16.9	165	2.03	1.26	2	98	34	60	92	36	166	18	192	302	152	1420	423	201

GENERAL REPORT.

EPIDEMIC DISEASES.

The return of epidemic diseases in Nottingham during 1903, furnished by the Registrar-General, is practically identical with that prepared by myself. This correspondence between the two sets of figures has been brought about mainly by the adoption of certain definite rules for the classification of deaths ascribed to diarrhœal diseases.

There is still, however, much room for improvement in the manner in which death-causes are certified by medical men and transcribed by Registrars, and, although a common method of interpretation may conduce to uniformity of results, the results are not necessarily nearer the truth on account of such uniformity.

To take the diarrhœa mortality once more for example:—a very considerable proportion of deaths due to epidemic diarrhœa are still undoubtedly classified under other headings by the above mentioned rules, through ambiguous and inaccurate certification in the first instance.

This is a matter of much importance in towns like Nottingham with a considerable diarrhœa mortality. There is much preventive work to be done in connection with epidemic diarrhœa, and it is highly desirable that the death-returns should furnish, as far as possible, a full and accurate measure of the mortality to which it gives rise.

Nottingham, 1903. Temperature, Rainfall, and Seasonal incidence of Epidemic Diseases.

THIRTEEN FOUR-WEEKLY PERIODS ENDING ON														
	Jan. 31	Feb. 28	Mar. 28	April 25	May 23	June 20	July 18	Aug. 15	Sept. 12	Oct. 10	Nov. 7	Dec. 5	Jan. 2, 1904.	TOTAL.
Mean Temperature	37.6	43.8	43.3	41.2	48.3	52.1	58.9	57.3	54.7	54.0	46.7	41.1	38.1	47.7
Rainfall in Inches	..	0.885	2.694	0.833	4.524	1.590	1.249	1.804	6.720	3.282	4.508	1.528	0.851	32.368
Onsets of Cases of														
Small-Pox	29	12	19	11	10	8	24	7	..	..	..	14	18	152
Scarlet Fever	93	110	85	110	104	81	114	126	117	126	125	96	133	1420
Diphtheria	40	37	31	26	32	30	36	35	26	34	32	26	36	423
Enteric Fever	16	14	17	6	8	6	9	19	21	15	31	21	21	204
Recorded Deaths from														
Measles	4	1	14	17	16	21	9	9	3	2	..	3	..	99
Whooping Cough	4	4	6	4	10	14	7	7	8	5	9	6	9	93
Diarrhoea	2	4	4	5	4	5	9	22	61	35	16	6	4	177

The figures in this table are compiled from the weekly returns, and are therefore subject to some correction; also, as the dates of onset are taken instead of dates of notification in the case of the notifiable diseases, it will be found that the numbers here do not coincide with those of other tables dealing with the same subject, but giving dates of notification instead of dates of onset.

Death Rates from the Principal Epidemic Diseases.
(Average) for previous Ten Years, and for 1903.

	Nottingham.		London.		76 Towns.
	10 years. 1893-1902.	1903.	10 years. 1893-1902.	1903.	1903.
Small-pox .. .	0·00	0·01	0·04	0·00	0·03
Measles	0·35	0·39	0·55	0·45	0·36
Scarlet Fever ..	0·19	0·14	0·17	0·08	0·14
Diphtheria	0·10	0·26	0·48	0·16	0·20
Whooping Cough ..	0·33	0·39	0·45	0·35	0·33
Enteric Fever ..	0·30	0·14	0·15	0·09	0·12
Diarrhœa	1·26	0·68	0·80	0·64	0·71
Total Epidemic Rate	2·53	2·01	2·64	1·77	1·89

SMALL-POX.

In my report for 1902 I gave a short account of the opening stages of the current outbreak during the early part of 1903. I now propose to recapitulate briefly, and then carry its history down to the close of the year. But I regret to say that the disease was still actively prevalent at the end of 1903, after a period of complete cessation extending from July 30th to November 12th.

The table of cases which accompanies this section of the Report gives full particulars, where such have been available, of each case coming under my notice. In my description of the outbreak, therefore, I shall confine myself to a general statement in outline, except where the circumstances of individual cases appear to call for special comment.

The total number of cases in the table is 152, and these came from 104 separate houses.

Nottingham had been almost entirely free from this disease for several years until the close of 1902. The earliest case at this time was that of a casual labourer and occasional tramp, æt. 40, living at Pleasant
c

Row, Hyson Green. This man became infected by contact with a person from outside (who visited Nottingham while suffering from small-pox), and appears to have developed definite symptoms between the 25th and 27th December, 1902, but these symptoms were not recognized as those of small-pox by the medical man who attended him, and the man was only discovered by me as a carrier of small-pox after several persons had become infected by his agency.

This man was the means of infecting some sixteen persons, apparently by direct contact. The latter were all adult males, and all had practically simultaneous attacks. All had frequented a public house at Hyson Green, to which the first patient had gone while his eruption was still in active development. Most of them recollected, when their own rashes were in progress, that they had seen a similar eruption on the first man's face, neck and hands. These sixteen secondary cases gave rise, in most instances by easily traceable contact, to about eighteen others.

In addition to this large group there occurred, during January, February, and a few days of March, nine other cases, all of tramps, and one of these a prisoner in Bagthorpe Jail. Seven of them brought the disease into Nottingham with them, coming respectively from Bingham, Loughborough, Leicester, Hinckley, Tamworth, Birmingham, and Chesterfield. The secondary cases directly traceable to the last group were happily only four in number.

The cases down to this point may be classed as the first section of the current outbreak. They were practically all under control towards the end of February. About this time, however, just when we were congratulating ourselves upon having apparently quenched the outbreak, other scattered cases began to appear among

residents in the same (Hyson Green) District. The infection, however, in these also was speedily traced to a barber on the Radford Road, who had pursued his calling while suffering from a mild attack of the disease. This man not only infected more than a dozen of his customers, but also his brother and his brother's family resident in the same neighbourhood, having actually used the bath in the house of the latter while his attack was in progress. His brother was employed in a village outside Nottingham, and going to work while still in an infectious condition, he in turn was the means of conveying the disease to this place.

At the end of May the local outbreak would have been at an end but for a fresh importation of infection.

The number of cases in our register at the close of the month was 84, or rather more than half the total for the full year—152. About this time, however, an extensive outbreak of small-pox occurred in Newstead colliery village, in the county of Notts., which was the means of communicating the disease afresh to Bulwell, where some of the Newstead colliers live, as well as to other places. Several colliers working at Bulwell, Cinder Hill, and Newstead pits were subsequently found to have been following their employment while actually suffering from mild attacks of small-pox, and thus been instrumental in propagating the disease among their neighbours, companions, and fellow-workmen. The mischief, as I have said, was not confined to Bulwell. Four members of one family in Sherwin street, near the centre of Nottingham, became infected in Bulwell at this time. An outbreak, involving more than a dozen cases, also occurred, with its centre in the Park Lane, Southwark Street, and Arnold Road District of Old Basford, which was thought by some to have arisen through infection

emanating from the Small-pox Hospital of the Basford Rural District Council on the Hucknall Road, but which was clearly traceable to previous undetected cases among Bulwell colliers.

A case in the Meadows District—probably infected by a visit to Old Basford—with onset dating from July 29, finally brought the local outbreak for the time being to a close.

Between the beginning of January and the end of July, 1903, some 120 cases had come to my notice in the City, and all had ended in recovery. Between the end of July and the 12th of November no case was brought to my knowledge in Nottingham, but on this last date I was called to see an unvaccinated coal miner, living at Bestwood Cottages on St. Alban's Road, Bulwell. This man (who ultimately died on the 11th day of disease) was then shewing the early symptoms of an extremely severe attack of small-pox. He had contracted infection from a male tramp whom he had befriended a fortnight before, when this man was passing through Bulwell and Nottingham on his way south in the early convalescent stage of a well marked attack of small-pox. It is satisfactory to be able to record that this man was discovered and detained a short time afterwards in Northamptonshire, with his small-pox markings still fully apparent. In passing through central Nottingham he stayed a night in the Narrow Marsh district, and left infection behind him here as well as in Bulwell.

The outbreak, however, would now almost certainly have been extinguished but for the action of one person, who contracted the disease—with a single intermediary—from this last-mentioned tramp. The person in question was the wife of a small shopkeeper in Sneinton. This woman, feeling unwell and noticing spots on her skin, went on the evening of December 6th

to consult a local medical man. This gentleman, having examined her, appears to have told her he thought she had small-pox, and he undoubtedly sent her home through the streets, promising to see her the next day. On this next day, some 16 hours after he had seen her at his house, he called at my office, now stating that he had no doubt about the nature of the woman's complaint, but informing two of my staff, who interviewed him, that she had given him a false name and address the previous evening. We made diligent search for this woman for five days without success, but on the sixth we received a clue which led to her discovery at a small sweet-and-provision-shop in Sneinton. Through this woman's criminal negligence, her two children, her husband and his sister, and 16 other persons in the neighbourhood were directly—immediately—infected. One of the latter, moreover, ultimately died of the disease in the City Small-pox Hospital.

One of the persons apparently infected by this woman was a tramp, who was shaved by a barber in Dame Agnes Street while his rash was developing (13-12-03), and who also about the same period called several times at a public house near the barber's shop. This man was the means of infecting, either directly or indirectly, some 14 persons living in various parts of the Central and Eastern districts of the City, including at least two in Narrow Marsh district, from which neighbourhood a dropping fire of cases has been coming at short intervals ever since. The sister-in-law of the shop-keeper's wife in Manvers Street, above referred to as having been also infected by this woman, was not discovered at the period of her attack, as she was hidden by her parents at this time. I only ascertained that she had been attacked, when finally called to the house where she lived by a report that several of her brothers and sisters were

down with the disease. I went to this house on the 18th January, 1904, and found 8 persons, of ages ranging from 9 to 25 years, suffering from small-pox of almost exactly the same date of onset in all cases. The parents had had small-pox in early youth, and they were the only inmates of the house to escape. These latter parents were afterwards summoned before the local magistrates and fined, for exposing infected persons and things in public places and for failing to notify me of the first case in their house.

Since the occurrence of this group of cases, yet two other members of the same family, the children of the eldest daughter living in a neighbouring house, have been attacked with small-pox (27-1-04).

I have carried this history slightly beyond the limits of the year, in order to shew how seriously the neglect of all precautions against the dissemination of infection on the part of the shop-keeper's wife above referred to operated in promoting a spread of the disease in her own family and among the public.

The number of cases which came to my knowledge in the City during the year was 152*. Of these 128 were vaccinated and 24 unvaccinated. There was one death among the vaccinated and 3 among the unvaccinated subjects. Two of these deaths, however, (one of a vaccinated male, æt. 53, the other of an unvaccinated male, æt. 66) were not certified as due to small-pox, having been caused by complaints from which their subjects were already dying at the time of their infection with this disease.

If we exclude these deaths, there was no mortality amongst the vaccinated, and 2 deaths in 24 cases or a death-rate of 8·3 per cent. among the unvaccinated. If we include them, there was 1 death among 128

*Tables shewing monthly numbers and age-period incidence of Small-pox cases will be found on pages 32 and 72 respectively.

vaccinated cases, and 3 in 24 unvaccinated. The first is equal to a percentage mortality of 0·78, the second to one of 12·50. Even with the inclusion of these deaths—which were not due to small-pox—the rate of mortality among the unvaccinated was sixteen times greater than among the vaccinated.

The effect of vaccination indeed (1) in protecting its subjects against small-pox in degrees varying directly with the thoroughness and recentness of the operation, and (2) in attenuating (for the time being at least) the virulence of small-pox in its passage through subjects highly protected by vaccination, is, I think, amply demonstrated by the tables which accompany this section.

The hospital accommodation for small-pox cases occurring in the City of Nottingham at the present time consists of a 40 bed wooden hospital on Bulwell Forest, at the extreme northern limit of the City. This hospital would probably have been extended but for the injunction action in the High Court seeking to secure its compulsory closure (which, however, happily ended on March 16th of the current year in favour of the Corporation). Under existing conditions, should it become necessary to accommodate more than 40 small-pox patients at one time, it would probably be necessary to re-open the old small-pox section of Bagthorpe Isolation Hospital for the purpose.

I may mention here that I have lately adopted the uniform practice of nursing all serious cases, singly, in bell tents with open sides—*i.e.*, practically in the open air—with the best results. All cases so treated have made a rapid recovery, with a minimum of septic complications. In addition also to the advantage to the individuals themselves, there

is the palpable advantage to other patients in hospital with them, of being out of reach of the poisonous emanations from their bodies during the acute stage of their attacks.

The progress of cases so treated has been so much more satisfactory than that of those nursed in the wards, that patients lately admitted to hospital have often asked, on the strength of what they have heard outside, to be nursed in the open air rather than in the hospital wards.

There is one other subject of purely medical import, though also of public interest, which I am tempted to touch upon very briefly, because of the questions concerning it which have been asked in the general press. I refer to the influence of light upon the small-pox rash. Of the deleterious effect of direct sunlight, especially summer sunlight, upon the rash, there can, I think, be no doubt. The retarding influence, indeed, of such light upon the normally rapid resolution taking place in the injured skin during early convalescence from a pustular attack is quite unmistakable. But the exclusion of white light from the skin affected with rash certainly does not appear to be attended by the beneficial results which have been alleged, for, notwithstanding the practically complete exclusion of light from large areas of the body in 12 of our severest cases during the whole active stage of rash, the latter has pursued its course unchecked and unmodified, and produced permanent injury to the skin of character and degree indistinguishable from that observed in the case of rash with which no such precaution has been adopted.

With regard to the Finsen red light treatment, a valuable article has lately been contributed to one of our medical papers by Drs. T. F. Ricketts and

J. B. Byles, which goes to confirm the opinion previously existent in this country that such treatment is altogether useless so far as the prevention of suppuration in the small-pox rash is concerned.

As regards disinfection. All infected houses are disinfected at once with formalin vapour or spray and solution of chloride of lime. All infected clothing, bedding, etc., is disinfected with steam in a Washington Lyon apparatus—temporarily reserved for the treatment of small-pox-infected goods only.

I have been ably assisted in the work of visiting small-pox cases and contacts by Dr. G. W. Procter, the late Resident Medical Officer at the Isolation Hospitals, and also by two indefatigable and experienced inspectors, Messrs. R. E. Byrns and Hy. Ward (Cert. San. Inst.). These two latter, when necessary, devote their whole time to the work.

It has been our practice hitherto, in the current and past outbreaks of small-pox in Nottingham, to keep all intimate contacts under observation for a period of 16 days after the removal of the case or cases with which they have been in contact to hospital. In dealing with very poor families and households, we have lately removed all who were willing to go, to the vacant temporary buildings at Bagthorpe Hospital. People of a better class have remained at home, and have been cared for and visited daily by the two visiting inspectors above-mentioned. Except in certain very special cases, maintenance only has been paid for during the period of quarantine.

The following special advantages are claimed for this system :—

- (a) It meets with general acceptance in the City from all classes of the community.

- (b) It enables us to detect many cases in their early stages, and is specially useful in enabling us to discover and remove a large number of very mild cases—especially cases modified by vaccination—which under other circumstances would probably altogether escape detection.
- (c) It can be carried out at a relatively small cost. The total amount thus expended during 1903 did not exceed £190.

Leaflets, handbills, and posters on the subjects of Notification, Small-pox, and Vaccination have been circulated in all parts of the City.

On the evening of each day during which fresh cases have come to our notice, a memo., giving the name and address of each fresh patient, has been sent to the following public and private persons in the City of Nottingham:—

- (1) The Secretary (General Hospital, Nottingham).
- (2) The House Surgeon (Children's Hospital, Nottingham).
- (3) Dr. R. R. Giddings (Surgeon to the Post Office).
- (4) Mr. J. H. Brown (Engineer to the Gas Department).
- (5) Miss M. Bowers (Secretary, Charity Organisation Society).
- (6) Mr. G. Muncaster Howard (Clerk to the Nottingham Guardians).
- (7) Mr. Edwin Browne (Vaccination Officer).
- (8) Mr. Herbert Clarke (Vaccination Officer).
- (9) Mr. W. J. Abel (Clerk to the Education Committee).
- (10) Mr. J. Potter Briscoe (City Librarian).
- (11) Mr. Stephen Moore (Water Department Manager).
- (12) Miss H. G. Bowers (Lady Health Visitor).
- (13) Mr. J. Smith (Supervisor of Taxes).
- (14) The Public Vaccinator or Vaccinators of the City in whose districts such fresh cases are resident.
- (15) The owners or rent collectors of houses in which cases have occurred.

In conclusion, I desire to express my indebtedness to Drs. Procter and Rees Jones, the past and present resident medical officers at the City Hospitals, to many medical men of Nottingham, to Inspectors Byrns, Ward, Williams, and G. A. Read (Insp. of Com. Lod. Houses), and other members of the Health Department staff, for invaluable aid in the onerous work of preventing the spread of infection, and lastly to the matron, nurses, and male staff of the City Hospitals for the excellent manner in which they have performed their duties during a period of exceptional stress and strain.

The following abstract of a Special Report furnished by me in the early part of the present year, illustrating the influence of tramps in promoting the spread of small-pox in this district during 1903, is, I think, of sufficient interest to justify its introduction here:—

“Small-pox was first introduced into Nottingham at the close of 1902, through the infection, by a person from outside the city, of a casual labourer and occasional tramp (Wm. Hurst) resident at Hyson Green. The latter in turn communicated the disease to more than a dozen persons through visiting a public-house frequented by them. During the third week of January also, a simple tramp named James Matthews was admitted to the Nottingham Workhouse, having come through Loughborough, Leicester, Mansfield, and Doncaster. The rash in this man’s case had been out three days at the time of his admission. Another tramp, Alfred Griffiths, aged 40, from Bingham, Notts., developed small-pox in H. M. Prison, Nottingham, about the 23rd January. Two days later another, John Roberts by name, presented himself at the Basford Workhouse with rash just commencing. On the 27th January two others were admitted to the Nottingham Workhouse in the same condition. On the 8th February, a tramp, J. King by name, suffering from small-pox, was discovered at one of the Common Lodging Houses in Narrow Marsh, en route through the town from north to south. On the 15th February another, Robert Bond, was admitted to Nottingham Workhouse with small-pox, having tramped from Burton-on-Trent. On the 26th February, J. T. Sanderson, a tramp from Tamworth, came with this disease into the same institution. There was no further case among persons of this class until the 18th April, when Thomas

Cattle, aged 38, a tramp from Loughborough, was admitted to the Basford Workhouse with his rash already out. The next day another tramp from Mansfield, Thomas Steer, aged 45, was found on the public road with a rash several days old.

“The long series of tramp cases above detailed were necessarily a source of continued danger to Nottingham, but no serious outbreak was occasioned in any individual instance, because, mainly through good fortune, the persons of the tramps were secured and isolated before they could do much harm in the town. No cases of small-pox occurred in Nottingham between the 27th July and the 12th November, but on or about this last date three cases occurred in Bulwell, a northern suburb of the City, and others in Narrow Marsh, near the centre of the old town, which had been infected by a tramp who passed through Bulwell and the centre of Nottingham at the end of October (without detention), and was ultimately discovered in Northamptonshire with small-pox scars apparent on him. One of this last man’s victims was another person of the same class, who carried the disease into the Nottingham Workhouse and was instrumental in infecting several persons there. The last case on my list, illustrating tramp infection, is that of Henry Watson, a tramp aged 43, who, through visiting a barber’s shop and a public-house (about 13-12-03) with a small-pox rash in its vesicular stage out upon him, was the means of infecting at least 14 persons resident in various parts of the central and eastern divisions of Nottingham, including at least two in the Narrow Marsh district—one of the worst slums in the Midland Counties—from which neighbourhood a dropping fire of cases has been coming at short intervals ever since. Many of the latter victims of the disease, though resident in the town, are persons of a very low class, living from hand to mouth, and very little better to deal with, except as regards motility, than actual tramps.”

The distribution of small-pox in England and Wales was very general during 1903. The deaths attributed to it in England and Wales numbered 754, in the 76 great towns 415, and in Greater London 31. No less than 47 of the 76 great towns registered deaths from small-pox. The towns (excluding London) with more than 20 deaths were as follows:—Liverpool (137), Manchester (25), Oldham (23), Leeds (22), and Leicester (21).

Nottingham, in comparison with most of the great towns invaded, suffered but slightly from the disease.

NOTTINGHAM, 1903.

HISTORY OF SMALL-POX CASES DISCOVERED IN THE CITY DURING THE YEAR.

No. OF CASE.	INITIALS OF NAME.	SEX.	AGE.	ADDRESS WHENCE REMOVED.	SOURCE OF INFECTION.	CONDITION AS REGARDS VACCINATION.	CHARACTER OF ATTACK.	DATE OF RASH.	DATE OF ADMISSION.	RESULT.	DATE OF DEATH OR DISCHARGE.
						V.—Vaccinated, i.—Primary Vaccination, with number indicating age in years, or inf.—under 1 year of age at time. ii., iii., etc.—Revaccination, with numbers ditto. G.—good vaccin. B.—bad vaccin. F.—fair vaccin. M.—vaccn. marks, with number following.	H.—Hæmorrhagic. C.—Confluent. D.—Discrete. V.M.—Very Mild.				
1	W. S.	M.	38	16, Ashwell Street, Hyson Green	B. H., No. 13, at Public-H.	V. i inf., B., M 2	C., head, arms, and legs..	6-1-1903	9-1-1903	Recovery	5-3-1903
2	A. K.	M.	40	3, Vincent Terrace, Randall Street, Hyson G.	Ditto ..	V. i. inf., G., M 2	D., severe	11-1-1903	11-1-1903	Ditto	18-2-1903
3	A. W. J.	M.	40	32, Randall Terrace, Randall Street, Hyson G.	Ditto ..	V. i. inf., G., M 4	D., mild	10-1-1903	11-1-1903	Ditto	16-2-1903
4	A. W.	M.	43	47, Mosley Street, Hyson Green	Ditto ..	V. i. inf., B., M 2	C. semi, severe	10-1-1903	11-1-1903	Ditto	21-2-1903
5	H. C.	M.	24	29, Pleasant Row, Hyson Green	Ditto ..	Unvaccinated	C.-semi, severe	10-1-1903	11-1-1903	Ditto	28-2-1903
6	D. T.	M.	30	22, Latimer Street, Bulwell	Ditto ..	Ditto	C., face and arms	10-1-1903	11-1-1903	Ditto	28-2-1903
7	A. H.	F.	8	2, Brown's Buildings, Terrace St., Hyson G.	Ditto ..	Ditto	D., severe	12-1-1903	12-1-1903	Ditto	31-1-1903
8	A. A.	M.	26	13, Glover's Yard, Lenton Street, Hyson G.	Ditto ..	V. i. inf., G., M 4	D., mild	12-1-1903	12-1-1903	Ditto	31-1-1903
9	H. O.	M.	33	21, Bateman Street, Hyson Green	Ditto ..	V. i. inf., G., M 3	D., mild	11-1-1903	13-1-1903	Ditto	4-2-1903
10	J. H.	M.	28	6, Pott Street, Birkin Avenue, Hyson Green	Ditto ..	V. i. inf., G., M 4	D., mild	10-1-1903	13-1-1903	Ditto	18-2-1903
11	A. H. B.	M.	30	77, Edwin Street, St Ann's Well Road ..	Ditto ..	V. i. inf., F., M 3	C.-semi, severe	10-1-1903	14-1-1903	Ditto	14-2-1903
12	S. F.	M.	46	4, Bulwer Road, Radford	Ditto ..	V. i. inf., G., ii. 18, G., M 5	V.M., 2 aborting vesicles only	12-1-1903	14-1-1903	Ditto	28-1-1903
13	B. H. (tramp)	M.	40	30, Pleasant Row, Hyson Green	A Commercial Traveller with S.P., from outside City ..	V. i. inf., F., M 3	D., severe	25-12-1902cir	17-1-1903	Ditto	4-2-1903
14	J. M. (tramp)	M.	37	Nottingham Workhouse	C.L. house, Loughboro' or Leicester	V. i. inf., G., M 3	D., mild	14-1-1903	17-1-1903	Ditto	28-2-1903
15	A. H.	M.	5	6, Pott Street, Birkin Avenue, Hyson Green	J. H., No. 10	V. i. 5, G., M 3 Vaccinated 6 days before rash	D., mild, aborting	20-1-1903	20-1-1903	Ditto	4-2-1903
16	S. H.	F.	19	2, Brown's Buildings, Terrace St., Hyson G.	B. H., No. 13	V. i. inf., G., ii. 19, G., M 7	V.M., 2 aborting papules only, after severe prodromal symptoms ..	20-1-1903	20-1-1903	Ditto	11-2-1903
17	E. F. K.	F.	39	3, Vincent Terrace, Randall Street, Hyson G.	Ditto	V. i. inf., B., M 2	D., very mild	21-1-1903	21-1-1903	Ditto	11-2-1903
18	J. H.	M.	5	2, Brown's Buildings, Terrace St., Hyson G.	Ditto	V. i. 5, G., M 4. Vaccinated 7 days before rash	V.M., few aborting papules, face, neck, and legs, after severe prodromal symptoms ..	21-1-1903	21-1-1903	Ditto	11-2-1903
19	E. B.	F.	28	77, Edwin Street, St. Ann's Well Road ..	A. H. B., No. 11	V. i. inf., G., ii. 28, G., M 8	D., mild	24-1-1903	22-1-1903	Ditto	18-2-1903
20	A. G. (tramp)	M.	40	H. M. Prison, Bagthorpe	Outside City, Bingham Dist.	V. i. inf., G., M 2	D., mild	23-1-1903	23-1-1903	Ditto	28-2-1903
21	L. P.	F.	21	25, Wollaton Street	Hyson Green group ..	V. i. inf., G., M 3	D., mild	23-1-1903	24-1-1903	Ditto	25-2-1903
22	L. M. L.	F.	22	2, Deptford Street, Bulwell	Outside City	V. i. inf., F., M 3	D., very mild	24-1-1903	25-1-1903	Ditto	14-2-1903
23	J. R. (tramp)	M.	63	Basford Workhouse	Outside City	V. i. inf., G., M 3	D., mild	26-1-1903	26-1-1903	Ditto	28-2-1903
24	E. L.	M.	55	76, Willoughby Street, Lenton	A. K., No. 2.. ..	V. i. inf., G., M 3	D., severe	25-1-1903	26-1-1903	Ditto	4-3-1903
25	C. P., at B.'s	M.	16	11, Shipstone Street, New Basford	Hyson Green group ..	V. i. inf., F., M 3	D., very mild, aborting early	26-1-1903	27-1-1903	Ditto	16-2-1903
26	T. S. (tramp)	M.	40	Nottingham Workhouse	Ditto	V. i. inf., G., M 4	D., mild	27-1-1903	27-1-1903	Ditto	9-2-1903
27	E. C. (tramp)	M.	42	Nottingham Workhouse	J. M., No. 14	V. i. inf., F.	D., mild	27-1-1903	27-1-1903	Ditto	25-2-1903
28	E. F.	F.	20	8, Pott Street, Hyson Green	J. H., No. 10	Unvaccinated	D., mild	28-1-1903	29-1-1903	Ditto	4-3-1903
29	E. B.	F.	22	11, Shipstone Street, New Basford	Hyson Green group ..	V. i. inf., B., M 4, indistinct	C., severe	30-1-1903	29-1-1903	Ditto	7-3-1903
30	J. P.	M.	45	13, Lincoln Street, Old Basford	Outside City	V. i. inf., F., M 2	C.-semi, mild, aborting ..	2-2-1903	3-2-1903	Ditto	4-3-1903
31	B. D.	M.	21	38, Woodhouse Street, Carlton Road ..	Outside City	V. i. inf., G., M 2	D., severe	1-2-1903	4-2-1903	Ditto	7-3-1903
32	E. L.	F.	49	2, Deptford Street, Bulwell	L. M. L., No. 22	V. i. inf., G., M 3	C.-semi, aborting	5-2-1903	7-2-1903	Ditto	21-3-1903
33	J. K. (tramp)	M.	40	Com. Lodging House, Reg. No. 38, Narrow M.	Outside City	V. i. inf., F., M 2	C.-semi	8-2-1903	8-2-1903	Ditto	7-3-1903
34	J. W. B.	M.	7	24, Latimer Street, Bulwell	D. T., No. 6, per undetected case, G. R., 27-1-03 ..	Unvaccinated	C.-semi	13-2-1903	14-2-1903	Ditto	4-4-1903
35	L. B.	F.	5	Ditto	Ditto	Ditto	Ditto	14-2-1903	15-2-1903	Ditto	28-3-1903
36	R. B. (tramp)	M.	58	Nottingham Workhouse	Burton-on-Trent	V. i. inf., G., M 3	D., severe	14-2-1903	15-2-1903	Ditto	28-3-1903
37	E. L.	F.	28	17, Goodall Street, Hyson Green	E. L., No. 32	V. i. inf., F., M 4	C.-semi, severe	16-2-1903	16-2-1903	Ditto	1-4-1903
38	E. H. M.	M.	28	83, Mansfield Road	Outside City	V. i. inf., G., M 4	C. semi, aborting in late papular stage	15-2-1903	17-2-1903	Ditto	18-3-1903
39	A. B.	M.	3	143, Forster Street, Radford	Outside City	Unvaccinated	D., severe	23-2-1903	23-2-1903	Ditto	31-3-1903

No. OF CASE.	INITIALS OF NAME.	SEX.	AGE.	ADDRESS WHENCE REMOVED.	SOURCE OF INFECTION.	CONDITION AS REGARDS VACCINATION.	CHARACTER OF ATTACK.	DATE OF RASH.	DATE OF ADMISSION.	RESULT.	DATE OF DEATH OR DISCHARGE.
						V.—Vaccinated. i.—Primary Vaccination, with number indicating age in years, or inf.—under 1 year of age at time. ii, iii, etc.,—Revaccination, with numbers ditto. G.—good vacen. B.—bad vacen. F.—fair vacen. M.—vacen. marks, with number following.	H.—Haemorrhagic. C.—Confluent. D.—Discrete. V.M.—Very Mild.				
40	W. S.	M.	23	14, Cecil Street, Lenton Boulevard ..	..	V. i. inf., G., M 4	D., severe	23-2-1903	24 2-1903	Recovery	28-3-1903
41	J. T. S. (tramp)	M.	30	Nottingham Workhouse	Outside City	V. i. inf., G., M 3	D., mild	26-2-1903	26 2-1903	Ditto	18-3-1903
42	S. A. M.	F.	26	1, Brown Street, Oldknow Street ..	..	V. i. inf., G., M 4	D., mild. Miscarried 7 months child with rash	4-3-1903	5-3 1903	Ditto	29-3-1903
43	E. S.	F.	46	14, Cecil Street, Lenton Boulevard ..	W. S., No. 40	V. i. inf., G., ii. 46, G., M 8	D., mild, aborting in papular stage	7-3-1903	7-3-1903	Ditto	28-3-1903
44	H. G., at F.'s	M.	18	11, Briar Street, Meadows	Ditto	2nd vacen. 3 days after exposure to infection V. i. inf., G., ii. 18, G., M 8	D., mild ditto	8-3-1903	9 3-1903	Ditto	30-3-1903
45	C. B.	M.	32	143, Forster Street, Radford	A. B., No. 39	2nd vaccination 4 days before rash. V. i. inf., G., M 2	D., mild, a typical aborting rash	8-3-1903	9-3 1903	Ditto	31-3-1903
46	F. B.	M.	5	Ditto	Ditto	V. i. 5, G., M 4. Vaccd. 4 days after exposure	D., mild, rapidly aborting rash	7-3-1903	9-3-1903	Ditto	31-3 1903
47	E. H.	F.	40	14, Lenton Street, Hyson Green ..	E. F. W., No. 50	V. i. inf., F., M 3	D., mild	9-3-1903	10-3-1903	Ditto	15 4 1903
48	C. L.	F.	31	6, Marlborough Street, Dunkirk ..	A. B., No. 39	V. i. inf., G., M 3	D., mild	10-3-1903	12-3-1903	Ditto	15-4-1903
49	C. B.	M.	26	89, Bateman Street, Hyson Green ..	E. F. W., No. 50	V. i. inf., F., M 3	C., very severe	11-3-1903	12-3-1903	Ditto	16-5-1903
50	E. F. W.	M.	30	264, Radford Road .. ..	..	V. i. inf., G., M 4	D., mild	21-2-1903	Not removed, wrkd. as barber all thro' illness. 15-3-1903	Ditto	
51	F. S., at M.'s	M.	40	260, Radford Road	E. F. W., No. 50	V. i. inf., G., M 4	D., mild	12-3-1903		Ditto	8-4-1903
52	J. D.	M.	33	118, Birkin Avenue, Hyson Green ..	Ditto	V. i. inf., G., M 4	D., mild	14-3-1903	16-3-1903	Ditto	4-4-1903
53	A. J., at A.'s	M.	20	3, Osborne Terrace, Wallan Street ..	Ditto	V. i. inf., G., M 4	D., very mild, aborting in papular stage	14-3-1903	Disease unde- tected by con- valescence.		H.D. till after
54	J. D.	M.	35	2, Spencer Terrace, Beaconsfield Street	Ditto	V. i. inf., G., M 3	D., mild, aborting early..	19-3-1903	21-3-1903	Recovery	25-4 1903
55	J. W.	M.	30	123, Noel Street	Ditto	V. i. inf., G., M 4	D., mild, aborting ..	3-3-1903	Disease unde- tected by con- valescence.		H.D. till after
56	J. S.	M.	5	Ditto	Ditto	Unvaccinated	D., severe	5-3-1903	Ditto	Ditto	Ditto
57	A. J. W.	F.	29	Ditto	Ditto	V. i. inf., G., M 4	D., very mild	14-3-1903	Ditto	Ditto	Ditto
58	H. D. W.	M.	3	Ditto	Ditto	Unvaccinated	C., very severe	21-3-1903	28-3-1903	Recovery	4-6-1903
59	J. E.	M.	34	12, Craven Street, Selhurst Street ..	Ditto	V. i. inf., G., M 3	D., mild, aborting ..	7-3-1903	28-3-1903	Ditto	4-4-1903
60	L. E.	F.	30	Ditto	J. E., No. 59	V. i. inf., G., M 4	D., mild, aborting ..	26-3-1903	28 3-1903	Ditto	15-4-1903
61	J. H. J.	M.	38	28, Forest Road	Ditto	V. i. inf., G., ii. 28, G., M 8	D., very mild, aborting..	29-3-1903	29-3-1903	Ditto	14-4-1903
62	R. C.	F.	31	16, Selhurst Street	Ditto	V. i. inf., G., ii. 31, G., M 6	D., very mild, aborting in vesicular stage..	29-3-1903	30-3 1903	Ditto	15-4-1903
63	H. M.	M.	50	28, Cathcart Street, Corporation Road	Hucknall S.P. Hosp., where employed for past 6 wks...	V. i. inf., G., M 4	D., mild, modified ..	28-3-1903	30-3-1903	Ditto	25-4-1903
64	S. H.	M.	17	3, Wilton Road, Hartley Road ..	F. S., No. 51	Unvaccinated	C.-semi, severe	30-3 1903	2-4-1903	Ditto	16-5-1903
65	S. J.	M.	46	4, Ward Street, Radford Road ..	E. F. W., No. 50	V. i. inf., F., M 3	D., mild	9-3-1903	Disease unde- tected by con- valescence.		H.D till after
66	J. J.	M.	25	Ditto	S. J., No. 65	Unvaccinated	C.-semi, severe	28-3-1903	31-3-1903	Recovery	19-5-1903
67	J. J.	F.	46	Ditto	Ditto	V. i. inf., B., M 1	C.-semi, severe	2-4-1903	3-4-1903	Ditto	15-5-1903
68	M. V.	F.	34	47, Craven Street, Hyson Green ..	J. E., No. 59	V. i. inf., G., ii. 34, G., M 8	Variola sine eruptione; prodromals (headache, belly ache, sweating & bilious vomiting), lasted 5 days.				
69	S. R.	F.	38	63, Duke Street, Basford	Selhurst Street cases	V. i. inf., F., M 2	C.-semi, severe but abrtng.	16-4-1903	17-4-1903	Recovery	19-5-1903
70	T. C. (tramp)	M.	38	Basford Workhouse	Loughboro'	V. i. inf., F., M 2	D., mild	16-4-1903	18-4-1903	Ditto	23-5-1903
71	T. S. (tramp)	M.	45	Found on High Road outside Workhouse	Mansfield	V. i. inf., F., M 3	C.-semi, aborting ..	16-4-1903	19-4-1903	Ditto	20-6-1903
72	J. D.	M.	23	7, Cremorne Crescent, Cremorne Street	Derby	V. i. inf., G., M 3	D., mild	26-4-1903	29-4-1903	Ditto	19-5-1903
73	S. S.	F.	18	42, Fyne Street	T. S., No. 71	V. i. inf., G., M 3	C.-semi, severe	3-5-1903	4-5-1903	Ditto	17-6-1903
74	M. A. H.	F.	5	2, Brewitt's Yard, Albion Street ..	..	Unvaccinated	C.-semi, severe	3-5-1903	5-5-1903	Ditto	10-6-1903
75	E. D.	F.	27	42, Blake Street, Gordon Road ..	..	V. i. inf., F., M 3	D., severe	9-5-1903	10-5-1903	Ditto	17-6-1903
76	J. H. N.	M.	30	10, Eleanor Terrace, Lamcote Street	G. T. P., No. 77	V. i. inf., G., M 4	D., mild	9-5-1903	10-5 1903	Ditto	28-5-1903
77	G. T. P.	M.	39	52, Glapton Road	Outside City, engine driver on Midland Railway ..	V. i. inf., G., ii. 16, G. Had Small-pox, M 4	D., very mild	25-4-1903	Disease unde- tected by con- valescence.		H.D. till after
78	R. G. P.	M.	3	Ditto	G. T. P., No. 77	Unvaccinated	D., severe	8-5-1903	12-5-1903	Recovery	17-6-1903
79	W. B.	M.	48	47, Kinglake Street	Dewsbury S.P. Hosp., where employed by Nottm. firm	V. i. inf., G., M 4	D., mild	15-5-1903	16-5-1903	Ditto	6-6-1903

NO. OF CASE.	INITIALS OF NAME.	SEX.	AGE.	ADDRESS WHENCE REMOVED.	SOURCE OF INFECTION.	CONDITION AS REGARDS VACCINATION.	CHARACTER OF ATTACK.	DATE OF RASH.	DATE OF ADMISSION.	RESULT.	DATE OF DEATH OR DISCHARGE.
						V.—Vaccinated. i.—Primary Vaccination, with number indicating age in years, or inf.—under 1 year of age at time. ii., iii., etc.,—Revaccination, with numbers ditto. G.—good vacen. B.—bad vacen. F.—fair vacen. M.—vacen. marks, with number following.	H.—Haemorrhagic. C.—Confluent. D.—Discrete. V.M.—Very Mild.				
80	J. H.	F.	9	2, Brewitt's Yard, Albion Street	M. A. H., No. 74	V. i. inf., F., M 3	D., mild	15-5 1903	16-5 1903	Recovery	4-6-1903
81	A. N.	F.	29	10, Eleanor Terrace, Lamcote Street	J. H. N., No. 76	V. i. inf., G., ii. 29, G., M 7	D., mild, aborting	23 5-1903	22-5-1903	Ditto	10-6-1903
82	C. L.	F.	54	74, Ortzen Street, Radford .. ..	.. ..	V. i. inf., G., ii. adult, G., M 4	D., very mild	22-5-1903	23-5-1903	Ditto	13-6-1903
83	G. C.	M.	16	25, Healey Street, Kirkewhite Street	Through hawking at infected houses	V. i. inf., G., M 3	D., mild, aborting	26-5-1903	27-5-1903	Ditto	18-6-1903
84	J. B.	M.	30	67, Garfield Road, Radford	Newstead Colliery	V. i. inf., G., M 4	D., mild, aborting in papular stage	29-5-1903	31-5 1903	Ditto	13-6 1903
85	D. M. D.	M.	25	4, Lemuel Terrace, Tishbite Street, Bulwell (And working at Newstead Colliery)	Ditto	V. i. inf., G., M 3	D, Mild	2-6-1903 cir.	Disease unde	tected by H. D.	till attack
86	D. M. D.	M.	1 $\frac{1}{2}$	Ditto	D. M. D., No. 85	Unvaccinated	D., severe	19-6-1903	22 6-1903	Recovery	18-7-1903
87	M. E. D.	F.	7	Ditto	Ditto	Ditto	D., severe	19-6-1903	22-6-1903	Ditto	18-7-1903
88	A. D.	F.	23	Ditto	Ditto	V. i. inf., G., M 3	D., mild	20-6-1903	22-6-1903	Ditto	11-7-1903
89	P. J. F.	M.	25	25, Wilford Grove	Hucknall or Newstead	V. i. inf., G., M 2	D., mild, after severe prodromals	24-6 1903	26-6 1903	Ditto	8-7-1903
90	F. D.	F.	30	11, West End Back Bldgs., Quarry Rd., B'll	P. D., No. 91	V. i. inf., G., M 3	D., mild	25-6-1903	28-6-1903	Ditto	22-7-1903
91	P. D.	M.	32	Ditto	Newstead	V. i. inf., G., M 3	D., mild	8 to 10-6-1903 cir.	This man worked at coal pit all thro'	attack.	
92	E. D.	F.	8	Ditto	P. D., No. 91	V. i. inf., B., M 2	D., very mild	29-6-1903	30-6-1903	Recovery	15-7-1903
93	B. R.	F.	31	2, Metal Yard, Park Lane, Old Basford	Ditto	V. i. inf., G.	D., mild	24-6-1903	7-7-1903	Ditto	1-8-1903
94	W. I.	M.	30	21, West Gate, Old Basford	Park Lane group	V. i. inf., G., M 3	D., mild	6-7-1903	7-7-1903	Ditto	1-8-1903
95	G. C.	F.	30	11, May's Cottages, Wallis Street	Ditto	V. i. inf., G., M 4	D., very mild, aborting	6-7-1903	7-7-1903	Ditto	22-7 1903
96	M. A. J.	F.	27	156, Park Lane, Old Basford	J. J., No. 97	V. i. inf., G., M 4	D, mild	6-7-1903	7-7 1903	Ditto	25-7-1903
97	J. J.	M.	30	Ditto	P. D., No. 91	V. i. inf., G., M 4	D., very mild	Disease unde	tected by H. D.	till after c	onvalescence.
98	B. T., at Y's	F.	13	Blenheim Farm, Bulwell	J. Y., No. 99	V. i. inf., G., M 4	D., very mild, aborting	4-7-1903	8-7-1903	Recovery	25-7-1903
99	J. Y.	F.	24	Ditto	Hucknall	V. i. inf., G., M 4	D., mild	10 to 16 6 1903 cir.	Disease unde	tected by H. D.	till after
100	J. T.	M.	33	72, Albert Street, Highbury Road, Bulwell	Ditto	V. i. inf., G., M 3	D., mild	6-7-1903	8-7 1903	Recovery	1 8-1903
101	H. T.	F.	29	78, Key Street, Quarry Road, Bulwell	A. T., No. 102	V. i. inf., G., M 4	D., very mild	8-7-1903	8-7-1903	Ditto	22-7-1903
102	A. T.	M.	33	Ditto	Hucknall	V. i. inf., G., M 4	D, mild	20 to 24-6-1903 cir.	Disease unde	tected by H. D.	till wife's
103	N. F.	F.	21	1, Pilkington Street, Bulwell .. ..	.. ..	V. i inf., G., M 4	D., very mild	7-7-1903	9-7-1903	Recovery	1-8-1903
104	Z. C.	F.	44	32, Wollaton Street .. ..	.. ..	V. i. inf., G., M 4	D., very mild, aborting	8-7-1903	10-7 1903	Ditto	5-8 1903
105	Z. C.	F.	72	Ditto	Z. C., No. 104	V. i. inf., G., M 4	D., very mild, aborting	23-7-1903	Very mild at	attack. Case	left at home.
106	M. S.	F.	28	134A, Queen's Walk .. ..	.. ..	V. i. inf., G., M 4	D., mild	9-7-1903	10-7-1903	Recovery	8-8-1903
107	J. H. C.	M.	8	11, May's Cottages, Wallis Street	Park Lane group	V. i. 8, G., M 4. After infection .. ..	.. ..	.. ..	.. ..	.. ..	.. ..
108	S. A. R.	F.	49	35, Chatham Street, Bulwell	B. R., No. 93	V. i. inf., G., M 3	D., mild	14-7-1903	15-7-1903	Recovery	1-8-1903
109	J. R.	M.	3 $\frac{1}{2}$	2, Metal Yard, Park Lane, Old Basford	Ditto	V. i. 9-7-03, G., M 4	D., aborting	17-7-1903	17-7-1903	Ditto	1-8-1903
110	A. L.	F.	7	22, Sherwin Street	Ditto	V. i. inf., B., M 2, indistinct	D., aborting, but general	9-7-1903	19-7-1903	Ditto	25-7-1903
111	M. L.	F.	17	Ditto	Ditto	Unvaccinated	D., aborting	17-7-1903	19-7-1903	Ditto	19-8-1903
112	C. L.	M.	10	Ditto	Ditto	V. i. inf., B., M 3	C.-semi, severe	19-7-1903	19 7-1903	Ditto	2-9-1903
113	A. L.	F.	30	Ditto	Ditto	V. i. inf., G., M 4	D., mild	17-7-1903	19-7-1903	Ditto	13-8-1903
114	J. H.	M.	57	180, Arnold Road, Old Basford	Park Lane group	V. i. inf., G., and re-vaccinated	D, mild	15-7-1903	20-7-1903	Ditto	5-8-1903
115	E. M.	M.	8	94, Minerva Street, Bulwell	A. T., No. 102	Unvaccinated	C.-semi, severe	19-7-1903	21-7-1903	Ditto	9 9-1903
116	S. L.	F.	27	76, Key Street, Bulwell	Hucknall	V. i. inf., G., M 4	D., mild	20 to 24-6-1903 cir.	Disease only	detected ac	cidental
117	K. V.	F.	40	1, Selkirk Street, Carrington .. ..	.. ..	V. i. inf., G., M 3	D., severe	24-7-1903	25-7-1903	Recovery	26-8-1903
118	J. R.	M.	14	35, Chatham Street, Bulwell	S. A. R, No. 108	Unvaccinated till 8 days before rash	D., very mild, aborting	26-7-1903	29-7-1903	Ditto	8-8-1903
119	J. R.	M.	49	Ditto	Ditto	Unvaccinated till 7 days before rash	C.-semi, severe	27-7-1903	29 7 1903	Ditto	2-9-1903
120	R. L.	F.	24	25, Muskham Street .. ..	.. ..	V. i. inf., G., M 2	D, very mild	29-7-1903	30-7-1903	Ditto	13 8-1903

No. of Case.	INITIALS OF NAME.	SEX.	AGE.	ADDRESS WHENCE REMOVED.	SOURCE OF INFECTION.	CONDITION AS REGARDS VACCINATION.	CHARACTER OF ATTACK.	DATE OF RASH.	DATE OF ADMISSION.	RESULT.	DATE OF DEATH OR DISCHARGE.
						V.—Vaccinated. i.—Primary Vaccination, with number indicating age in years, or inf.—under 1 year of age at time. ii., iii., etc.,—Revaccination, with numbers ditto. G.—good vacen. B.—bad vacen. F.—fair vacen. M.—vacen. marks, with number following.	H.—Hæmorrhagic. C.—Confluent. D.—Discrete. V.M.—Very Mild.				
121	A. P.	M.	32	2, Bestwood Terrace, St. Alban's Rd., Bulwell	Infected by tramp who passed through Nottm with S.P. rash on him. and was ultimately held up in Northamptonshire.	Unvaccinated	C., Vesicular, with late hæmorrhages	10-11-1903	12-11-1903	Death	21-11-1903
122	A. B. (tramp)	M.	41	57, Narrow Marsh	Ditto ..	V. i. inf., G., M 3	C.-semi, severe	8to10 11-1903	13 11-1903	Recovery	2-1-1904
123	R. P. (tramp)	M.	31	Nottingham Workhouse	Tramp in Common Lodging House, Derby	Unvaccinated	C, severe	11-11-1903	13 11-1903	Ditto	10-1-1904
124	R. B.	M.	40	300, Coventry Road, Bulwell	Same as A. P., No. 121	V. i. inf., G., M 3	D., mild	12-11-1903	14 11-1903	Ditto	5-12-1903
125	J. C.	M.	18	29, St. Alban's Road, Bulwell	A. P., No. 121		C.-semi, severe	24-11-1903	26-11-1903	Ditto	2 1 1904
126	T. R.	M.	29	Nottingham Workhouse	R. P, No. 123	V. i. inf., G., M 3	D., very mild, after severe prodromals	26 11-1903	28 11-1903	Ditto	19-12-1903
127	M. B.	M.	53	Ditto	Ditto	V. i. inf., G., M 3	D.	26-11-1903	28-11-1903	Death This man was practically dying of Broncho-Pneumonia and Heart Disease at the time of his S.P. onset	
128	J. K.	M.	66	Ditto	Ditto	Unvaccinated	C.-semi, on face, sparse elsewhere	27-11-1903	29 11 1903	Death This man was practically dying from Hemiplegia at the time of his S.P. onset.	2-12 1903
129	S. E.	F.	42	16, Knob Yard, Narrow Marsh	A. B., No. 122	V. i. inf., G., M 4	C. on face, sparse on trunk and limbs	27or28 11-'03	30-11 1903	Recovery	20-1-1904
130	P. D.	M.	40	8, Pomfret Street	Ditto	V. i. inf., M 3, hidden by S.P. rash	C., very severe, hæmorrhagic in patches	27or28 11-'03	1-12 1903	Ditto	5-2-1904
131	J. W.	M.	30	79, Narrow Marsh	Ditto	V. i. inf., G., M 4	D., severe	28-11 1903	2 12 1903	Ditto	30-12 1903
132	K. C.	F.	22	17, Pollock Street	A. B., No. 122	V. i. inf., G., M 2	D., very mild	28-11-1903	2 12 1903	Ditto	19-12-1903
133	A. B.	M.	28	35, Poplar Street	Ditto	V. i. inf., G., M 4	D., mild, complicated with Syphilis	28-11-1903	3-12 1903	Ditto	30-12-1903
134	E. G.	F.	28	34, Manvers Street	K. S., No. 145	V. i. inf., G., M 3	D., severe	28 11 to 1 12 1903 cir.	11-12 1903	Ditto	30-12-1903
135	C. H. G.	M.	28	Ditto	E. G., No. 134	V. i. inf., G., M 3	D., very mild	13-12-1903	13-12-1903	Ditto	10-1-1904
136	C. G.	M.	9	Ditto	Ditto	Unvaccinated	D., severe	12 12 1903	13-12 1903	Ditto	20-1-1904
137	H. G.	M.	4	Ditto	Ditto	Ditto	D., severe	13-12-1903	13-12-1903	Ditto	20-1-1904
138	G. M.	M.	18	8, Pomfret Street	P. D., No. 130	V. i. inf., G., M 3	D., very mild	13-12 1903	14-12-1903	Ditto	30-12-1903
139	C. J.	M.	32	Ditto	Ditto	V. i. inf., G., M 2	D., severe	13-12 1903	14 12-1903	Ditto	16-1-1904
140	F. S.	M.	73	116, Hucknall Road, Carrington	Pomfret Street group, by fomites	V. i. inf., G., M 3	D., mild	13 12-1903	15 12-1903	Ditto	2-1-1904
141	W. H. R.	M.	4	3, Thoresby Place, Pierrepont Street	E. G. No. 134	Unvaccinated	C., severe	15-12-1903	16-12-1903	Death	23-12-1903
142	C. R.	M.	9	Ditto	Ditto	Ditto	D., severe	15 12 1903	16-12-1903	Recovery	2-1-1904
143	C. B.	M.	28	8, Pomfret Street	P. D., No. 130	V. i. inf., G., M 3	D., very mild	16 12 1903	16-12-1903	Ditto	30-12-1903
144	M. A. M.	F.	41	Ditto	Ditto	V. i. inf., G., ii., G., 8 days before onset	Variola sine eruptione, all prodromals well marked.				
145	K. S.	F.	33	7, East Street, St. John's Street	Tramp who infected Nos 121 and 122	V. i. inf., G., M 3	D., very mild	16to20 11-'03	17-12-1903	Recovery	30-12-1903
146	C. K.	F.	36	Ditto	K. S., No. 145	V. i. inf., G., M 3	D., very mild	1-12-1903	17-12-1903	Ditto	30-12-1903
147	A. S.	M.	39	Barmaid at P. H., Fox & Grapes, Southwell Rd. Ditto	C. K., No. 143	V. i. inf., G., M 4	D., very mild	14-12-1903	17-12-1903	Ditto	30-12 1903
148	H. W., at H.'s (tramp)	M.	43	23, Duncombe Street	E. G., No. 134	V. i. inf., G., M 3	D., mild	11-12-1903cir	19-12-1903	Ditto	16-1-1904
149	E. H.	F.	16	"Tiger's Head," Narrow Marsh	Ditto	Unvaccinated	D., severe	15-12-1903	21-12-1903	Ditto	23-1-1904
150	L. A.	F.	29	33, Flewitt Street, and 3 & 5, Southwell Road	C. K., No. 146	V. i. inf., G., M 2	D., mild	20 12-1903cir	28-12-1903	Ditto	13 1-1904
151	M. M.	F.	28	32, Taylor's Yard, Narrow Marsh	E. H., No. 149	V. i. inf., G., M 3	D., very mild	29-12-1903	29-12-1903	Ditto	13-1-1904
152	A. W.	M.	26	41, Herbert Street	H. W., No. 145	V. i. inf., G., M 4	D., mild	30-12-1903	31-12-1903	Ditto	23-1-1904

Vaccination.—The proportion of children born returned as successfully vaccinated in Nottingham, for 1902 and 1903, was for each year rather more than 70 per cent.—70·97 per cent. for 1902 and 70·49 for 1903. The figure for 1890 was almost as good (69·8), but since then, until within the past 3 years, the proportion of vaccinated infants has been for the most part highly unsatisfactory. Public vaccination, however, cannot be placed upon a thoroughly satisfactory footing, until re-vaccination shall have been made compulsory, and a strict and uniform administration of the Vaccination Acts enforced throughout the country.

**Vaccination in Nottingham Union. Summary of Statistics,
1883—1903.**

	Births.	PERCENTAGE.			Certified as Insus-ceptible of Vaccina-tion.	Had Small-Pox.	Certificates granted to "Conscien-tious Ob-jectors."
		Success-fully Vac-cinated.	Died Un-vaccinated.	Not finally accounted for.			
Average of 5 yrs.							
1883-88 ...	6194	74·3	12·4	13·0	10	...	...
1889 ...	5398	67·3	12·0	12·1	12	...	...
1890 ...	5084	69·8	11·7	14·0	11	...	...
1891 ...	5033	67·1	12·0	16·0	8	...	...
1892 ...	5142	63·8	12·0	16·2	15	...	...
1893 ...	5193	64·4	13·4	17·7	24	...	...
1894 1st half-year	2632	62·5	12·7	11·2	9	...	...
1895 do.	2758	43·1	14·2	15·3	11	...	...
1896 do.	2728	29·4	11·7	16·4	3	...	...
†1896-97 ..	5313	18·97	15·60	52·88	3	...	...
†1897-98 ...	5391	23·05	17·23	30·47	4	...	684
†1898-99 ...	5857	42·4	15·5	10·2	28	...	543
§†1899-1900 ...	6904	50·8	15·13	7·5	15	...	682
†1900-1901 ...	6699	57·83	14·73	10·7	21	...	1146
Jan. to Dec., 1901	6827	65·13	13·90	0·07	51	...	718
1902 1st half-year	3336	69·87	11·66	0·30	85	...	183
1902 entire year	6766	70·97	12·62	0·19	21	...	443
1903 1st half-year	3443	70·96	10·49	0·61	9	...	261
1903 2nd do.	3506	70·02	12·55	1·14	5	1	214

† June of first year to July of second.

‡ Including Returns of Basford, Bulwell, and North Wilford for April, May, and June, 1899.

§ First Twelve Month's Return from New Parish of Nottingham.

The conscientious objector was slightly more in evidence during 1903 than in 1902. The actual number of certificates granted in 1903 was 475, equal to 6·8 per cent. of the births, as compared with 443 and 6·5 per cent. in 1902.

Measles.—This disease was again epidemic in the City during 1903, the cases rising rapidly to maximum during the second quarter and falling away sharply afterwards. The time which had elapsed between the previous period of maximum prevalence and that of 1903 was 2 years, but the actual interval between the lower slopes of the falling and rising epidemics respectively was 12 months, comprising the whole of the year 1902. During the first quarter of 1903 the disease spread slowly through the City from North to South, but, although it undoubtedly extended continuously, affecting all districts in its passage, it did not affect all with equal severity, Bulwell and S.E. suffering considerably more than the other Sub-Divisions in relation to their populations. During the second quarter the maximum rise occurred in all the Sub-Districts excepting S.W. During the third quarter there was a rapid decline of prevalence in all but S.W., where the maximum rise now took place. During the fourth quarter there was almost a complete abatement, except in N.E. where the disease was still hanging about.

**Deaths from Measles, during each of the Four Quarters of 1903,
in the Registration Sub-Districts of the City.**

DISTRICT	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell.. ..	11	11	2	1	25
N.W... ..	2	10	..	..	12
N.E.	3	13	4	3	23
S.W.	2	4	9	..	15
S.E.	5	15	3	..	23
TOTALS	23	53	18	4	98

The measles epidemic caused considerable interference with the work of public elementary schools. Particulars of school closure on account of measles and other infectious diseases of childhood will be found at the end of this section of the Report (Epidemic Disease Section). The number of deaths from measles in the City during the year was 98, and the death-rate per 1000 of population, 0·39. The corresponding rate for the year in England and Wales was 0·27, in the 76 great towns 0·36 and in London 0·45.

Scarlet Fever.—There was a considerable increase in the number of reputed cases of scarlet fever as compared with the record of the previous year. The total for 1903 was 1,420, as compared with 966 the year before, and 913 and 1,394 in 1901 and 1900 respectively. The average annual number of cases during the 10 years ended with 1902 was 1,198. The number of individual houses in which cases occurred during 1903 was 1,161. The case-mortality was fractionally higher than during 1902, being equal to 2·4 per cent. as compared with 2·1 per cent. in the latter year. 478 cases out of the total 1,420, or 33·7 per cent., were removed to the City Isolation Hospital. These 478 cases, with 73 left over from 1902, make a total of 551 under treatment in hospital during the year. Full particulars of these cases are given in the Hospital Report, but it will be interesting here to compare the case mortality in the two sets of cases—those nursed in hospital and those nursed at home. Of the 551 cases treated in hospital during the year, 6 ended fatally. The case mortality here, therefore, was only 1·09 per cent., an extremely low figure. Of the 942 cases nursed at home 28 ended fatally. The case death-rate here is equal to 2·97 per cent., or nearly 3 times greater than that among the hospital cases.

The total cases and deaths in the usual age periods were as follows:—0-1 year, 19 cases and 1 death; 1-5 years, 361 cases and 14 deaths; 5-15 years, 703 cases and 13 deaths; 15-25 years, 263 cases and 6 deaths. There were no deaths above the 25th year, but there were 56 cases between 25 and 35 years of age, 14 between 35 and 45, and 3 between 45 and 55.

The highest case-mortality was, as usual, in the 1-5 years period, but being under 4 per cent. (3·887%) it was well below the average of other recent years. There was a comparatively high fatality in the 15-25 years period (2·28 per cent.), but this was in some measure balanced by the fact that there were no deaths among the 73 cases between the 25th and 55th year of age.

The distribution of the disease in time and place throughout the City was again remarkably general and even during the year. A study of the accompanying table will make this abundantly plain.

Notifications of Scarlet Fever, during each of the Four Quarters of 1903, in the Registration Sub-Districts of the City.

DISTRICT.			FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	..	..	52	47	57	56	212
N.W...	..	..	78	63	73	90	304
N.E. ..	..	..	86	113	117	101	417
S.W. ..	..	..	43	55	70	67	235
S.E. ..	..	..	59	40	79	74	252
TOTALS	..	..	318	318	396	388	1420

The death-rate from Scarlet fever in Nottingham during 1903 was equal to 0·14 per 1,000 living—or 14 per 100,000. The average local rate per 1,000 for the 10 years, 1893—1902, was 0·19. The corresponding rate for 1903, in England and Wales, was 0·12, in London 0·08, in the 76 great towns 0·14, and in the 103 lesser towns 0·12. Thirty-six of the great towns

had higher rates than Nottingham, 3 had equal rates with it, and 36 had lower rates from scarlet fever during 1903. Nottingham, therefore, with 3 other towns (Grimsby, Portsmouth, and Devonport), occupied a middle place in this regard among the 76 great towns of the country.

Diphtheria.—In my report for 1902 I drew attention to the fact that diphtheria was apparently on the increase in this City. I mentioned the growing prevalence of so-called simple sore throat as an almost certain herald of the approach of true diphtheria. The fact that an excessive prevalence of apparently simple sore throat invariably preceded diphtheria outbreaks, was pointed out by the late Sir Richard Thorne many years ago. Never before in Nottingham have I received in any one year so many complaints of cases of sore throat, attributed for the most part, by the persons complaining, to defective drainage or other sources of offensive effluvium. Whatever view we may take of the popular belief that sewer air and other kindred exhalations, as such, are capable of producing sore throat and other like ailments, there can be no doubt of their depressing effect upon the health of persons exposed for any length of time to their influence. This being so, it behoves us to foster by every means in our power a practical popular appreciation of the superior value of fresh, as compared with foul air. But, while doing what we can to suppress all tangible nuisances, we should not forget that in all probability the harm produced by them is relatively insignificant, as compared with that arising from the habitual inhalation of air in overcrowded dwellings and workshops laden with the products of respiration and other organic impurities. It does, indeed, seem strange that one of the most potent and palpable promoters of good health, fresh air, should be so unpopular and distasteful, in an age when any well-vaunted health

nostrum offered to the public by interested vendors, however absurd its claims, is swallowed with avidity.

The number of notified cases of diphtheria during 1903, exclusive of those in which the diagnosis was ultimately amended, was 423. This was more than twice the number (205) notified in 1902, and somewhat less than four times those (113 and 116 respectively) of 1901 and 1900. The average annual number of the preceding 10 years had been 79.

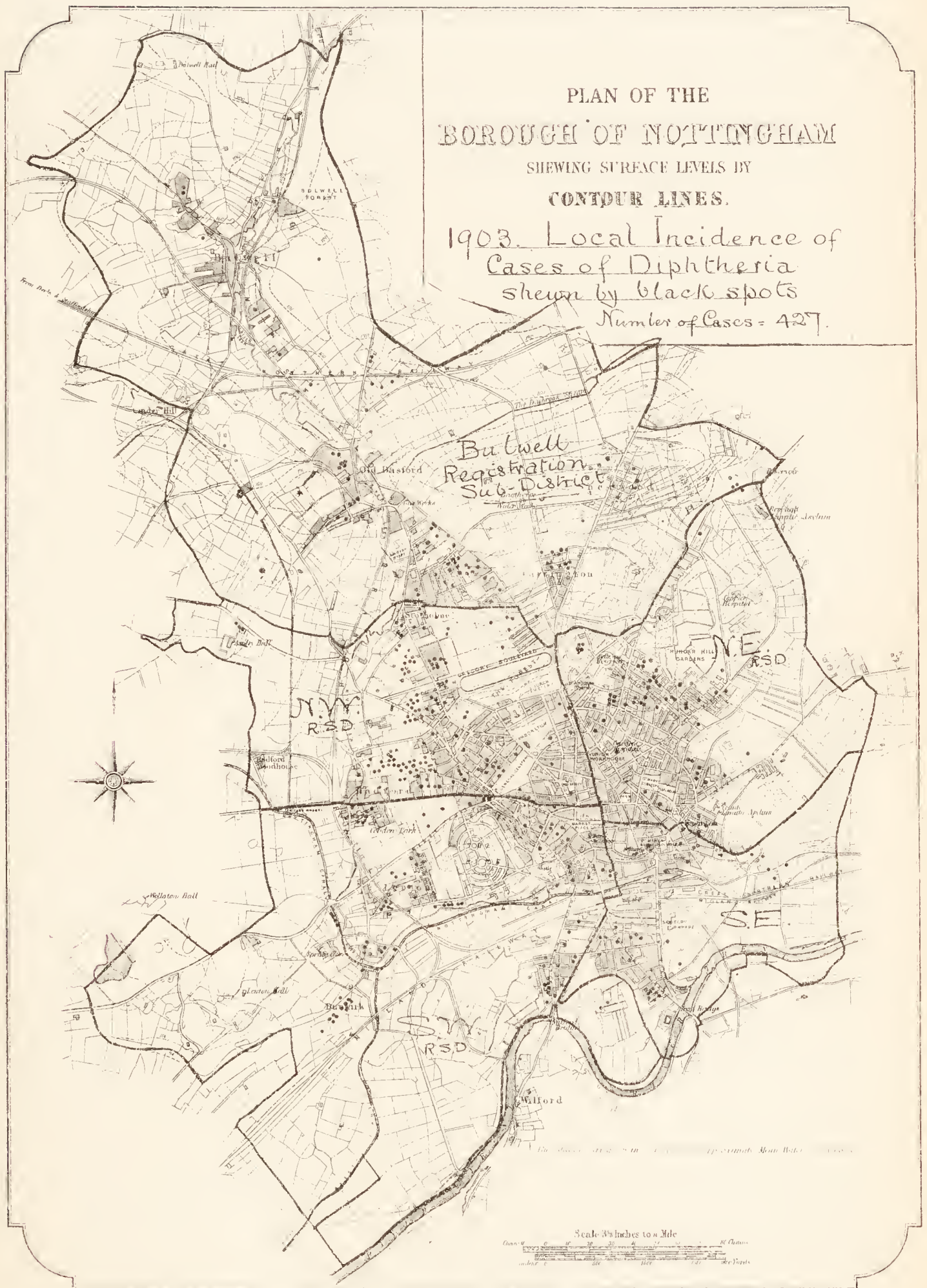
The number of separate houses invaded by the disease was 376.

The distribution of the disease was as usual very general, but N.E. and S.E. (contiguous districts on the E. side of the City containing together rather more than 100,000 people) had attack rates, the first of less than 1, the second of just over 1, per 1000, as compared with rates of well over 2 per 1000 in Bulwell, N.W. and S.W. Forty-three out of a total of 60 deaths were in Bulwell, N.W. and S.W., 14 and 15 in each, and 17 only altogether in N.E. and S.E., 11 in first and 6 in the last.

Notifications of Diphtheria, during each of the Four Quarters of 1903, in the Registration Sub-Districts of the City.

DISTRICTS.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	34	13	19	22	88
N.W.	39	29	41	23	132
N.E.	9	22	16	17	64
S.W.	31	23	24	24	102
S.E.	4	9	9	15	37
TOTALS	117	96	109	101	423

1903. Local Incidence of
Cases of Diphtheria
shown by black spots
Number of Cases = 427.



Notwithstanding the general distribution of the disease in the City and districts as a whole, there was considerable local concentration of cases in the following particular neighbourhoods in the course of the outbreak of 1903:—New Basford, Scotholme, Radford, districts on either side of Robin Hood Chase, Dunkirk, Lenton and the Meadows—but in the last three to a less degree than in the others.

The quarterly totals of cases for the whole City were:—1st quarter, 117; 2nd quarter, 96; 3rd quarter, 109; 4th quarter, 101.

The cases and deaths in age periods were as follows:—0-1 year, 2 cases and 1 death; 1-5 years, 361 cases and 14 deaths; 5-15 years, 703 cases and 13 deaths; 15-25 years, 263 cases and 6 deaths; 25-35 years, 56 non-fatal cases; 35-45 years, 14 non-fatal cases; 45-55 years, 3 non-fatal cases.

It is quite usual to find about 50 per cent. of the total mortality under the 5th year, and about 80 per cent. under the 10th year, but it is certainly unusual to find more than 93 per cent. of the deaths under the 10th year, and as many as 100 cases with only one death above the 15th year, as in Nottingham during 1903.

The 60 deaths attributed to diphtheria in Nottingham during 1903 correspond with a death-rate of 0·24 per 1000 (or 24 per 100,000). The rates for 1902, 1901, and 1900 were identical, at exactly half this figure. The mean annual rate of the town for the 10 years ended with 1899 was 0·08.

The death-rate from diphtheria in England and Wales during 1903 was 0·18 per 1000, in London 0·16, in the 76 great towns 0·20, and in the 103 lesser towns 0·16.

In Hanley, Staffordshire, the rate for the year was no less than 1·22 per 1000. The same town had a rate of 1·28 per 1000 for 1902.

One hundred and twenty-nine cases of diphtheria were under treatment in Bagthorpe Isolation Hospital during 1903 (exclusive of those remaining at the close of the year), and 18 of these ended fatally. The case mortality in hospital, therefore, was equal to 13·9 per cent. Of the 296 cases nursed at home 42, or 14·2 per cent., ended fatally. It is only fair to the hospital to say that several cases were sent there in an absolutely hopeless condition.

Anti-Diphtheritic Serum is now distributed from the Health Department, free of charge, to medical men in attendance upon diphtheria cases among the poor. Twenty-six applications for this serum, to be used among the poor, have been made at the Health Department during the past year.

There is no disease in which the aid of bacterial diagnosis is more valuable than diphtheria, and it is gratifying to be able to report that Dr. Jacob, the City Bacteriologist, has been called upon to examine specimens from 214 separate cases of reputed diphtheria during 1903.

Whooping-Cough.—After a partial remission of prevalence extending from the second quarter of 1901 to the fourth quarter of 1902, this disease was once more epidemic in Nottingham during 1903.

During the 15 months of remission the quarterly number of deaths ranged from 3 to 8, with an average of 6. During the 4 quarters of 1903, the quarterly range was from 15 to 32 and the average 23.

The distribution of the disease in the town was remarkably general. The only district free from whooping-cough deaths during any one quarter was

N.E. (in the fourth quarter of the year). This district, which contains considerably more than one-fourth of the total population of the City, had only about one-eighth of the death from this cause during the year.

Deaths from Whooping-Cough, during each of the Four Quarters of 1903, in the Registration Sub-Districts of the City.

DISTRICT.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	3	7	3	10	23
N.W... ..	3	9	8	4	24
N.E.	3	7	2	..	12
S.W.	3	4	4	5	16
S.E.	3	5	5	4	17
TOTALS	15	32	22	23	92

The names of the schools closed during the year on account of this and other infectious diseases of childhood will be found at the end of the Epidemic Disease Section of this Report.

The death-rate from whooping-cough in Nottingham during 1903 was equal to 0·39 per 1000, as compared with rates of 0·15 and 0·42 in 1902 and 1901 respectively, and an average rate of 0·37 for the ten years 1892—1901.

The corresponding rate in England and Wales during 1903 was 0·27, in the 76 towns 0·33, and in London 0·35.

Enteric Fever.—The corrected number of notifications of enteric fever cases received by me during 1903 was 200. This corrected total is the lowest reliable annual number recorded in the City since the commencement of notification in 1883. The

attack-rate per 1000 of population is therefore necessarily the lowest on record. It was equal only to 0·812 (81 per 100,000). The mean attack rate during the 14 years ended with 1902 was 1·81, or considerably more than double the rate for 1903. The number of houses in which cases occurred was 171. The number of deaths from enteric fever during the year was 36 according to my returns, and 35 according to those of the Registrar-General. The last number is equal to a death-rate per 1000 of population of 0·14 (or 14 per 100,000). There has been only one year since the extension of the borough in 1878 in which the annual total has been as low as 36, and that was 1892, when the deaths numbered exactly 36. During the 25 years 1878—1902 the annual deaths ranged from 36 in 1892 to 114 in 1899, and the annual average during these years was 64—*i.e.*, nearly double the number for 1903.

This extraordinary diminution in the number of cases and deaths is doubtless principally due to the continuously cold and wet season of 1903, but the removal of huge accumulations of night soil from the Health Department Wharves within the City during the past two years, together with improved methods of scavenging and disposing of refuse, recently introduced, have certainly assisted the meteorological conditions in no small degree.

In previous Reports I have repeatedly urged that the bulk of the enteric fever in Nottingham is essentially endemic in character, and confined almost exclusively to its poorer neighbourhoods, and that the principal factor in its propagation in such neighbourhoods is the direct excremental pollution of air, soil, and other surroundings of human life through the agency of the ubiquitous pail-closet and the accumulations of excrement in the City. There are of course innumerable vehicles of infection, but

flies and dust are certainly the most active, especially in the early stages of an outbreak, and neither could operate to any considerable extent under the conditions which obtained during the greater part of the Summer of 1903.

The spot-map at the end of this section shews very plainly, however, that the disease has practically the same distribution in years like 1903 as in those with a higher degree of prevalence. The essential point of difference is the substitution of sporadic cases in the former for dense groups of cases in the latter. Scattered cases still occur, but the disease does not spread.

The disease indeed is almost exclusively confined to certain poor districts, and it is difficult to understand how it is, that, with such extensive communication as at present subsists between different classes of the community, it does not become more generally distributed.

There now seems to be little doubt that popular opinion is rapidly ripening for the conversion of the existing pail-system to one of water-carriage. But though the public may be ready for the change, many years will in all probability elapse before any considerable proportion of the pail-closets are abolished. For the present, therefore, we must arrange for the decent scavenging and maintenance of our 37,432 closets, and for the prompt removal and disposal of our night-soil as if there were no better prospect before us than the indefinite continuance of the system. The wooden pail has been (or will be in the near future) definitely abandoned, as absorbent and liable to leak, and a galvanized steel drum substituted; but the prompt and complete scavenging of all organic refuse, the careful cleansing and disinfecting of pails, and the immediate destruction or exportation from the City of all night-

soil are essential, before it can be said that the local authority is doing all in its power to reduce the inherent nuisance of the dry-system to an acceptable minimum.

I may perhaps be allowed once more to explain that, in endeavouring to account for the persistent endemicity of enteric fever in certain districts of Nottingham to some extent by the presence and influence of the pail-system, I do not lose sight of the fact that the disease is undoubtedly propagated by innumerable other agencies. So long as the belief is held that the specific microbe must be swallowed, or otherwise absorbed, before the disease can develop, so long must we admit that anything capable of conveying it to the human interior may act as an infecting agent.

I am keenly alive to the fact that when we have once satisfied ourselves that any carrier has operated in a considerable number of cases, we are extremely liable to infer the general operation of such an agency, to the exclusion of others perhaps equally deserving of attention. But, bear this in mind as I will, I am unable to discover any local influence to compare for potency with that of our dry-system of excrement disposal. As in former years, we have in Nottingham again during 1903 the records of several small groups of cases, the circumstances of which appear to suggest that infected food has acted as the causative agent; but, as these have accounted for only some 25 to 30 cases altogether, they do not call for any special comment. There were 15 cases in which the eating of shell-fish had been an antecedent—within the incubation period—to an attack of the disease, but these cases were widely scattered among a large number of others which had no such previous history, and lose thereby very much of their special significance.

The ratio of incidence of enteric fever cases upon houses furnished with pail-closets, midden-privies, and w.c.'s respectively, has been as follows during the past five years :—

1899.

Houses with pail-closets	-	-	1 case in 70 houses.
„ „ midden-privies	-	1 „	18 „
„ „ water-closets	-	1 „	296 „

1900.

Houses with pail-closets	-	-	1 case in 92 houses.
„ „ midden-privies	-	1 „	20 „
„ „ water-closets	-	1 „	407 „

1901.

Houses with pail-closets	-	-	1 case in 84 houses.
„ „ midden-privies	-	1 „	12 „
„ „ water-closets	-	1 „	255 „

1902.

Houses with pail-closets	-	-	1 case in 129 houses.
„ „ midden-privies	-	1 „	21 „
„ „ water-closets	-	1 „	294 „

1903.

Houses with pail-closets	-	-	1 case in 267 houses.
„ „ midden-privies	-	1 „	50 „
„ „ water-closets	-	1 „	504 „

The number of pail-closets in the City at the close of 1903 was 37,432, of midden-privies 250, and of w.c.'s 13,111.

Owing to the extraordinary diminution in the number of cases during 1903 as compared with the preceding years, the ratio of incidence upon each class of houses has necessarily also declined; but it will be noticed that the incidence upon w.c. houses has not

fallen to the same extent as that upon privy and pail-closet houses. It is possible, as I suggested last year, that the insanitary influence of the waste-water closet may be the explanation. I have not up to the present been able to obtain an exact return of the number of these closets existent in the City, but hope next year to obtain it, and thus be able to state the proportion of enteric fever cases occurring in houses provided with such closets.

The chart and table of cases and deaths in weekly periods (for 1903), which accompany this section, shew a fairly normal seasonal distribution for this country. The autumnal rise, with its highest point at the beginning of November, is a little late both for England and Nottingham, but the departure from the normal is only a matter of days. There were 47 cases and 10 deaths in the first quarter, 20 cases and 4 deaths in the second, 59 cases and 9 deaths in the third, and 78 cases and 10 deaths in the fourth.

Nottingham, 1903. Enteric Fever. Cases and Deaths in Weekly Periods.

Week	January.				February.				March.				April.				May.				June.							
ending	10	17	24	31	7	14	21	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27			
Cases	5	5	2	4	4	4	2	4	4	1	6	6	3	1	1	1	4	3	1	..	4	..	..	2	..	= 67*	
Deaths	3	1	2	..	..	1	1	..	..	..	1	1	..	1	..	..	1	1	..	..	..	1	..	..	..	= 14*	
Week	July.				August.				September.				October.				November.				Dec.				Jan.			
ending	4	11	18	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	
Cases	4	..	5	2	4	8	5	9	3	4	5	4	6	3	2	6	8	5	12	8	9	1	3	3	4	6	8=137*	
Deaths	3	2	..	3	..	1	..	1	1	1	1	..	1	2	1	..	1	..	1= 19*

* Figures made up from weekly returns, without correction.

The tables of male and female cases and deaths in age-periods, for 1902 and 1903 respectively, are specially interesting when read together.

The special features about the figures for 1902 is the excess of the female above the male mortality; while the main point about those for 1903 is a similar excess on the male side. The excess in the latter case holds good—where deaths occur—in all except the 15–25 years and the 65–75 years periods.

NOTTINGHAM.

Enteric Fever. Cases and Deaths (distinguishing Males and Females) in Age Periods.

1902.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.
CASES	Male ..	..	14	47	42	43	23	14	7	2	..	192
	Female ..	1	5	53	45	42	18	9	8	2	..	183
												375*
DEATHS	Male ..	..	1	4	2	6	4	1	..	1	..	19
	Female ..	..	1	6	6	11	2	3	2	..	..	31
												50*
AVERAGE CASES TO ONE DEATH.												All Ages.
Male ..	..	..	14.0	11.7	21.0	7.2	5.7	14.0	..	2.0	..	10.1
Female	..	..	5.0	8.8	7.5	3.8	9.0	3.0	4.0	..	..	5.9
												7.5

1903.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.
CASES	Male ..	..	7	25	35	24	10	3	3	..	..	107
	Female ..	..	3	32	27	20	8	2	..	1	..	93
												200*
DEATHS	Male ..	..	1	7	3	6	3	2	1	..	..	23
	Female ..	..	..	3	4	3	2	..	..	1	..	13
												36*
AVERAGE CASES TO ONE DEATH.												All Ages.
Male ..	..	..	7.0	3.6	11.7	4.0	3.3	1.0	3.0	..	..	4.6
Female	..	..	..	10.7	6.8	6.6	4.0	..	..	..	7	7.1
												5.5

* These totals include a few unverified cases.

The tables also show, however, that with the diminution in the number of cases there has come a higher general case-mortality.

The total case death-rate of both sexes in 1903 was equal to 1 death in 5·5 cases, the rate among males being 1 in 4·6, and that among females 1 in 7·5.

The total rate of both sexes in 1902 was equal to 1 in 7·5, the male rate being 1 in 10·1, the female rate 1 in 5·9.

The average male rate for England and Wales is 1 death in 5·85 cases, and the average female rate 1 in 5·32.

The total case-mortality for Nottingham in 1903 is in substantial agreement with that for the country as a whole; the rates for either sex only are divergent.

Owing to the great reduction in the number of cases during 1903, the General Hospital was able to accommodate all but a small number of those requiring removal from home. In consequence of this, only 31 (12 of males and 19 of females) came under treatment at Bagthorpe during the year. The usual particulars of these will be given in the Hospital Report, but I may mention that two only ended fatally—one of each sex.

The death-rate, per 1000 living, from enteric fever in England and Wales during 1903 was 0·10 in London 0·09, in the 76 great towns 0·12 and in the 103 lesser towns 0·11.

NOTTINGHAM. 1903.
 ENTERIC FEVER.
 WEEKLY NUMBERS
 OF
 CASES AND DEATHS.



PLAN OF THE BOROUGH OF NOTTINGHAM

SHOWING SURFACE LEVELS BY

CONTOUR LINES.

1903. Local Incidence of Cases
of Enteric Fever
Shewn by Black Spots.

Number of Cases = 200.

Daybrook

B. & W. Registration
Sub-District

NE R.S.D.

NE R.S.D.

SE R.S.D.

SW R.S.D.

Scale 3 1/2 inches to a Mile
Owens 0 10 20 30 40 50 60 70 80
Yards 0 100 200 300 400 500 600 700 800

NOTTINGHAM, 1903.

ENTERIC FEVER.—Cases and Deaths, Male and Female, during each of the Four Quarters of the Year in Registration Sub-Districts.

		FIRST QUARTER.		SECOND QUARTER.		THIRD QUARTER.		FOURTH QUARTER.		TOTALS.				
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Both Sexes.		
Bulwell	{ Cases Deaths }	8 1	2 ...	2 ...	2 1	4 1	10 2	14 2	9 1	28 4	23 4	51 8	Cases } Deaths }	Bulwell
N.W.	{ Cases Deaths }	6 ...	5 1	2 ...	3 3	6 2	8 ...	10 3	9 1	24 5	25 5	49 10	Cases } Deaths }	N.W.
N.E. ...	{ Cases Deaths }	12 3	5 ...	2 ...	3 ...	10 2	5 1	12 2	10 ...	36 7	23 1	59 8	Cases } Deaths }	N.E.
S.W. ...	{ Cases Deaths }	3 3	5 1	2 ...	... ...	3 3	2 ...	... ...	4 1	8 6	11 2	19 8	Cases } Deaths }	S.W.
S.E. ...	{ Cases Deaths }	2 ...	2 1	2 ...	2 ...	4 ...	6 ...	4 1	2 ...	12 1	12 1	24 2	Cases } Deaths }	S.E.

FOUR-WEEKLY PERIODS ENDING														
	Jan. 28.	Feb. 25.	March 25.	April 22.	May 20.	June 17.	July 15.	Aug. 12.	Sept. 9.	Oct. 7.	Nov. 4.	Dec. 2.	Dec. 30.	
1899.														
Mean Temperature ..	40.6	40.1	40.0	44.8	48.0	58.1	60.9	62.8	60.0	54.8	47.4	46.5	35.6	..
Rainfall in Inches ..	2.61	1.52	0.30	1.96	2.12	1.21	2.90	0.70	0.81	3.50	2.30	0.8	2.2	22.93
Cases of Enteric Fever ..	23	44	26	10	16	14	16	29	76	89	132	104	46	626
	Jan. 27.	Feb. 24.	March 24.	April 21.	May 19.	June 16.	July 14.	Aug. 11.	Sept. 8.	Oct. 6.	Nov. 3.	Dec. 1.	Dec. 29.	
1900.														
Mean Temperature ..	39.0	34.175	38.325	41.725	46.075	53.825	57.55	60.75	55.35	53.00	48.225	42.775	43.725	47.269
Rainfall in Inches ..	3.386	2.732	1.288	1.068	1.452	3.353	1.201	4.300	1.049	1.710	1.255	2.024	2.005	26.823
Cases of Enteric Fever ..	21	30	15	21	17	28	12	36	61	70	83	69	38	501
	Jan. 26.	Feb. 23.	March 23.	April 20.	May 18.	June 15.	July 13.	Aug. 10.	Sept. 7.	Oct. 5.	Nov. 2.	Nov. 30.	Dec. 28.	
1901.														
Mean Temperature ..	37.025	33.875	39.4	40.425	49.05	54.5	58.6	62.5	57.225	52.7	45.975	38.425	35.25	46.534
Rainfall in Inches ..	2.418	1.162	1.621	1.995	0.483	0.825	1.760	2.280	1.173	1.205	1.439	1.669	3.371	21.401
Cases of Enteric Fever ..	42	32	35	46	23	18	13	32	81	74	53	35	36	520
	Jan. 25.	Feb. 22.	March 22.	April 19.	May 17.	June 14.	July 12.	Aug. 9.	Sept. 6.	Oct. 4.	Nov. 1.	Nov. 29.	Dec. 27.	
1902.														
Mean Temperature ..	41.400	30.950	43.025	41.025	44.475	50.325	58.725	55.100	56.700	52.375	48.150	43.475	41.050	46.67
Rainfall in Inches ..	2.157	1.008	1.856	1.698	1.255	2.246	0.751	2.679	2.570	1.419	2.016	0.931	1.508	21.524
Cases of Enteric Fever ..	44	10	9	24	14	15	31	21	30	38	46	58	29	369
	Jan. 24.	Feb. 21.	March 21.	April 18.	May 16.	June 13.	July 11.	Aug. 8.	Sept. 5.	Oct. 3.	Oct. 31.	Nov. 28.	Dec. 26.	
1903.														
Mean Temperature ..	36.9	44.6	41.7	43.6	45.3	52.9	56.8	57.1	55.8	54.0	49.3	42.9	38.5	47.6
Rainfall in Inches ..	1.862	0.353	2.746	1.513	4.407	0.929	1.354	2.107	5.141	2.868	6.205	1.882	0.882	32.249
Cases of Enteric Fever ..	16	14	17	6	8	6	9	17	20	15	31	21	21	200

NOTTINGHAM, 1890-1903.

GENERAL ENTERIC FEVER DATA.

YEAR.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Population ..	211,695	214,606	217,550	220,551	223,584	226,659	229,775	232,935	236,139	239,384	237,770	240,438	243,191	245,993
Cases of Enteric Fever ..	337	375	198	479	334	422	444	428	423*	607*	505*	535*	375*	200*
Attack or Case rate ..	1.59	1.74	0.91	2.17	1.49	1.86	1.93	1.83	1.79	2.53	2.12	2.22	1.54	0.812
Deaths from Enteric Fever ..	58	70	36	68	61	55	75	45	53	114	75	79	50	36
Death-rate from Enteric Fever..	0.27	0.33	0.15	0.31	0.28	0.24	0.34	0.21	0.22	0.48	0.33	0.329	0.21	0.14
Mean air temperature ..	47.3	50.4	45.5	49.0	47.9	47.0	48.2	48.1	49.2	48.3	47.269	46.534	46.67	47.7
Rainfall in inches	17.698	25.889	21.579	20.165	20.252	20.753	22.992	23.726	19.750	22.635	26.823	21.401	21.524	32.368
Death-rates from Enteric Fever in great towns..	0.19	0.20	0.15	0.24	0.19	0.20	0.19	0.18	0.20	0.22	0.20	0.17	0.15	0.12

* Number obtained from Weekly Returns of Notifications without subsequent correction.

Diarrhœa.—I have already explained in the introduction to this section that, by a rigid adherence to the rules laid down by the Registrar-General for the classification of deaths ascribed to diarrhœal diseases, I am now able to furnish a return practically identical with that issued by his department; but I have also pointed out that this number cannot be accepted as a true measure of the mischief wrought by epidemic diarrhœa, as many deaths palpably due to this infantile scourge but carelessly certified are by the above method of classification eliminated from the list.

The total number of diarrhœa deaths computed in the manner I have explained was 166. One hundred and thirty-three, or 80 per cent. of these, were of children under 1 year of age, and 154, or 93 per cent., of children under 5 years.

The deaths under 1 were evenly divided between the sexes (68 m. and 65 f.), and also distributed with unusual uniformity over the four quarters of the first year of life, but there was a slight excess in the third and fourth quarters as compared with the first and second.

I am again unable to give the exact proportion of hand-fed children among the victims of this malady, but, taking a group of 50 cases in children under one a short time since, we found that 39 at least were being brought up by hand. The specific organism, probably fœcal in its origin, finds its way into their food and is thus directly swallowed.

Many local authorities have established dépôts for the preparation and distribution of sterilized milk, which is put up in hermetically sealed bottles after sterilization, and thus given out to poor households containing young children requiring such food. An establishment of this kind was opened on the outskirts of

Radford some years ago by a large local firm of cattle and milk dealers, but the venture proved a failure, because public opinion among the poor was not sufficiently informed of the necessity for sterilizing the milk of hand-fed children to secure for it the support it undoubtedly deserved. I am of opinion, however, that the time has come for the Corporation to take this matter up, by establishing one or more of these depôts in the City and pushing the use of sterilized milk for hand-fed infants. Such mission work as this last falls naturally within the province of the lady health visitor, and I have no doubt that, once established and actively and intelligently managed, such a scheme would prove of great and growing advantage to infant life among the poor of this City.

The principal factors in determining the amount of epidemic diarrhœa are temperature and rainfall, in direct and inverse relation respectively. The low temperature and high rainfall of the summer of 1903, therefore, are the explanation of the relatively small amount of summer diarrhœa of that year. The propagation of bacterial life in foul soil and refuse is powerfully discouraged, and the distribution of particulate infection by flies and dust reduced to a minimum, by a wet and cold season. Much of the rain that fell in the summer of 1903 was sufficient to wash as well as cool the superficial layers of the soil. Rain fell on 17 days in July, 18 days in August, 21 days in September, and 30 days in October, and the total rainfall for these 4 months, during which epidemic diarrhœa is commonly prevalent, was no less than 16·781 inches, *i.e.*, more than an inch above the total rainfall for 1887.

I have introduced once more, to illustrate this section, tables of diarrhœa deaths and earth temperatures 1 ft. and 4 ft. respectively below the ground surface, for weekly periods during the diarrhœa seasons

of 1903 and other recent years. It will be seen that, whatever may happen elsewhere, Dr. Ballard's theory of the relation of the deep earth temperature to diarrhœa mortality still holds good—with slight variation—for Nottingham. When our 4 ft. thermometer has registered 58° , or thereabouts, for some days in succession, we may always, in the absence of heavy rain, expect a rise of diarrhœa mortality. Dr. Ballard gave 56° as the 4 ft. temperature which heralded a rise of mortality, but this is certainly too low for the Nottingham district.

NOTTINGHAM, 1903.

Weekly Deaths from Diarrhœa in Registration Sub-Districts.

	WEEK ENDING																		
	July—				August—					Sept.—				October—					Nov.
	4	11	18	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7
Bulwell	..	2	..	1	..	1	..	2	1	..	..	1	1	1	2	1	1	1	—
N.W.	1	1	..	..	1	2	1	3	3	1	3	1	2	3	..	1	1	..	1
N.E.	..	1	1	..	1	1	3	6	8	6	6	6	2	..	4	1	1	2	..
S.W.	1	..	1	1	1	2	..	4	..	1	4	3	..	1	1	1	2	1	..
S.E.	..	1	..	1	3	2	1	3	2	5	3	..	2	2	3	..	1	..	..
	2	5	2	3	6	8	5	18	14	13	16	11	7	7	10	4	6	4	2
																			—
																			143

The incidence of the disease was heaviest as usual upon the poor low-lying districts of Leen Side, Poplar, Sneinton, the Meadow Platts, and Old Radford, but all the working-class neighbourhoods suffered more or less severely, excepting Bulwell, where, as in many former years, the incidence was relatively light.

The death-rate per 1000 from diarrhœa in Nottingham during 1903 (estimated in the manner already described) was equal to 0·68 (or 68 per 100,000). The Nottingham rate for 1902 was 0·72, for 1901, 1·51, and for the 10 years, 1891-1900, 1·17.

The corresponding rate for England and Wales during 1903 was 0·50 ; for the 76 great towns 0·71, and for London, 0·64.

It has been our practice in the diarrhœa seasons of recent past years to write to a large number of people in various parts of the City, whose avocations bring them into touch with the poor, asking for early information of any cases of diarrhœa which may come to their notice. Our object in seeking such information is to enable our lady health visitors to offer advice and assistance in necessitous cases. I have no doubt the response to this appeal for information in the interests of the poor will grow, as our object in making it becomes better appreciated.

1898.

	WEEK ENDING																		
	July 9	July 16	July 23	July 30	Aug. 6	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10	Sept. 17	Sept. 24	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct. 29	Nov. 5	Nov. 12
Earth Temperature 1 ft. below surface ..	59.8	60.6	61.8	60.9	60.9	59.4	62.8	62.2	58.7	63.2	61.4	58.7	53.4	54.7	51.7	52.3	52.4	49.4	47.7
Earth Temperature 4 ft. below surface ..	56.3	56.9	57.7	58.2	58.4	58.3	59.1	59.8	59.4	59.4	60.3	59.9	58.5	56.9	56.2	54.8	54.4	53.6	51.7
Deaths from Diarrhœa	5	2	2	9	8	14	13	28	34	39	53	41	27	15	11	9	6	3	5

1899.

	WEEK ENDING																	
	July 8	July 15	July 22	July 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9	Sept. 16	Sept. 23	Sept. 30	Oct. 7	Oct. 14	Oct. 21	Oct. 28	Nov. 4
Earth Temperature 1 ft. below surface ..	59.8	64.7	66.1	62.7	65.7	63.0	63.8	65.4	62.8	62.1	59.0	54.8	51.2	49.2	47.0	45.3	47.0	48.2
Earth Temperature 4 ft. below surface ..	57.1	58.5	60.4	60.9	61.1	61.5	61.4	61.5	62.0	61.3	60.8	59.7	57.5	55.3	53.4	51.8	50.4	50.6
Deaths from Diarrhœa	6	18	29	33	55	55	54	61	46	37	40	25	19	11	5	3	4	3

1900.

	WEEK ENDING																		
	July 7	July 14	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3	Nov. 10
Earth Temperature 1 ft. below surface ..	60.1	62.6	64.4	67.8	63.6	59.2	62.7	62.7	59.4	57.9	56.5	57.1	56.6	52.2	53.1	48.6	48.2	48.6	49.7
Earth Temperature 4 ft. below surface ..	56.5	57.1	59.4	61.7	62.8	61.1	60.4	61.2	60.4	59.6	58.7	58.0	57.7	56.6	55.2	53.9	52.2	51.3	51.3
Deaths from Diarrhœa	..	7	7	19	32	27	22	30	33	31	16	20	17	9	10	5	8	5	2

1901.

	WEEK ENDING																		
	July 6	July 13	July 20	July 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept. 28	Oct. 5	Oct. 12	Oct. 19	Oct. 26	Nov. 2	Nov. 9
Earth Temperature 1 ft. below surface ..	61.0	64.1	66.6	64.9	64.5	63.3	62.4	62.3	59.9	57.4	57.6	56.4	57.3	56.4	51.0	50.5	46.0	46.4	42.9
Earth Temperature 4 ft. below surface ..	55.9	57.4	58.9	60.5	60.5	60.8	60.9	60.7	60.5	59.2	58.4	57.8	57.5	57.4	56.0	54.6	52.7	51.2	49.8
Deaths from Diarrhoea	5	4	15	34	40	46	36	41	28	22	8	7	8	5	2	5	3	1	3

1902.

	WEEK ENDING																		
	July 5	July 12	July 19	July 26	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30	Sept. 6	Sept. 13	Sept. 20	Sept. 27	Oct. 4	Oct. 11	Oct. 18	Oct. 25	Nov. 1	Nov. 8
Earth Tem- perature 1 ft. below surface ..	62.3	61.7	62.0	58.4	58.2	57.7	57.5	58.3	58.3	58.7	57.0	53.5	54.0	52.0	49.7	50.0	48.0	48.9	47.9
Earth Tem- perature 4 ft. below surface ..	56.7	57.6	58.0	58.0	57.6	57.2	55.9	57.2	57.3	57.7	58.0	56.6	55.6	54.9	53.6	52.4	51.4	50.8	50.3
Deaths from diarrhoea	2	2	2	3	6	1	3	4	5	12	15	26	12	15	14	7	7	4	2

1903.

	WEEK ENDING																		
	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7
Earth Tem- perature 1 ft. below surface ..	62·8	62·1	60·9	60·5	59·8	59·3	59·6	57·4	56·2	57·6	55·0	51·4	56·6	56·8	53·8	50·4	49·6	48·4	45·6
Earth Tem- perature 4 ft. below surface ..	55·0	56·4	55·8	53·0	57·9	57·9	58·0	57·9	57·1	56·9	57·1	54·1	54·1	56·1	55·9	53·0	53·0	51·9	50·9
Deaths from Diarrhœa	2	5	2	3	6	8	5	18	14	13	16	11	7	7	10	4	6	4	2

SCHOOL CLOSURE AND EXCLUSION OF CHILDREN FROM SCHOOL ON ACCOUNT OF INFECTIOUS DISEASE.

Certificates were issued by me during the year in respect of the exclusion of children, and also in respect of the closure, for various periods, of the following Public Elementary Schools, principally on account of the prevalence of measles and whooping-cough in the several School Districts:—

A.—COUNCIL SCHOOLS.

Sycamore Road School.	Peoples' College (Girl's) School.
Sneinton „	Huntingdon Street „
Leen Side „	High Pavement „
Ilkeston Road „	Carlton Road „
London Road „	Colwick Road (temporary)
Coventry Road „	Dunkirk „
St. Ann's Well Road „	Alfreton Road „
Blue Bell Hill „	Wollaton Road „
Bosworth Road „	Sherwood „
Berridge Road „	Southwark „
Albert Street, Bulwell (including Main Street temporary)	Old Basford „
Mundella „	Scotholme „
Shelton Street „	Radford Boulevard „
Queen's Walk „	Carrington „
Quarry Road „	Forster Street „
Stanley Road „	New Basford „
Lenton „	Colwick Rd. (temporary) „
Clarendon Street „	Bath Street „
Collygate Road „	Colwick Street „

B.—CHURCH SCHOOLS.

St. Mary's School.	St. Mark's School.
St. Peter's „	St. Ann's „
St. Jude's „	St. Nicholas' „

Tables giving the cases and deaths, in age-periods, of the notifiable infectious diseases, the ratio of deaths to cases, and the deaths from the non-notifiable infectious diseases, which have occurred in Nottingham during 1903 and other recent years. Further Notification Tables will be found under the special sections dealing separately with notifiable infectious diseases.

1898.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	14	267	549	70	20	9	2	..	..	..	931
<i>Deaths</i> ..	5	20	7	..	..	..	..	..	..	..	32
Diphtheria <i>Cases</i> ..	3	33	27	10	7	2	3	..	..	..	85
<i>Deaths</i> ..	3	16	4	..	..	..	..	..	..	..	23
Enteric Fever <i>Cases</i> ..	2	45	130	95	80	39	22	7	3	..	423
<i>Deaths</i> ..	1	7	8	11	13	6	5	1	2	..	54

1899.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	29	742	1525	220	49	9	6	..	..	..	2580
<i>Deaths</i> ..	2	29	16	4	1	..	1	..	..	..	53
Diphtheria <i>Cases</i> ..	3	43	51	25	8	8	3	..	1	..	142
<i>Deaths</i> ..	3	14	9	1	1	1	1	..	..	..	30
Enteric Fever <i>Cases</i>..	..	33	170	180	119	63	31	10	6	1	613
<i>Deaths</i>..	..	1	18	38	27	20	4	3	2	1	114

1900.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	15	393	779	165	34	6	..	2	..	..	1394
<i>Deaths</i> ..	1	34	18	1	1	..	..	..	..	..	55
Diphtheria <i>Cases</i> ..	1	26	45	25	10	6	1	2	..	..	116
<i>Deaths</i> ..	1	16	8	..	..	..	1	2	..	..	28
Enteric Fever <i>Cases</i> ..	1	33	138	150	110	53	16	10	1	..	512
<i>Deaths</i>..	..	8	9	20	16	12	6	4	..	..	75

1901.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	15	255	500	114	27	6	1	..	..	..	918
<i>Deaths</i>..	..	5	6	..	..	..	..	..	..	..	11
Diphtheria <i>Cases</i> ..	1	42	38	24	6	3	1	..	..	..	115
<i>Deaths</i>..	..	15	13	..	1	..	..	..	..	..	29
Enteric Fever <i>Cases</i> ..	7	43	169	141	96	47	25	2	5	..	535
<i>Deaths</i> ..	2	3	15	21	16	9	12	1	4	..	83

1902.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever <i>Cases</i> ..	5	290	517	122	30	1	1	..	..	..	966
Deaths..	1	12	7	1	1	1	..	..	..	..	23
Diphtheria <i>Cases</i> ..	4	52	99	28	16	7	3	..	..	..	209
Deaths..	4	19	7	1	..	..	..	..	..	..	31
Enteric Fever <i>Cases</i> ..	1	19	100	87	85	41	23	15	4	..	375
Deaths..	..	2	10	8	17	6	4	2	1	..	50

1903

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-pox <i>Cases</i> ..	1	6	19	24	55	27	14	3	3	..	152
Deaths..	..	1	..	..	1	..	..	..	..	..	2
Scarlet Fever <i>Cases</i> ..	19	361	703	263	56	14	3	..	..	..	1419
Deaths..	1	14	13	6	..	..	..	..	..	..	34
Diphtheria <i>Cases</i> ..	2	100	225	68	21	6	3	..	1	1	427
Deaths..	1	24	34	1	..	..	..	..	..	..	60
Enteric Fever <i>Cases</i>..	..	10	57	62	44	18	5	3	1	..	200
Deaths..	..	1	10	7	9	5	2	1	1	..	36

Nottingham. Notification Data up to the end of 1903.

	SCARLET FEVER			ENTERIC FEVER			SMALL POX.			DIPHtheria.			Deaths from Non-Notifiable Zymotic Diseases.			
	*			†			*			†			Measles.	Whooping Cough.	Diarrhoea.	TOTAL.
	Deaths.	Known cases.	Ratio of known cases to Deaths.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.				
1881	353	..	..	61	..	..	4	..	..	7	..	..	34	88	202	324
1882	280	1029	3.7	71	68	1.0	51	446	8.7	21	..	..	133	73	225	431
1883	59	428	7.3	73	159	2.2	2	23	11.5	34	125	3.7	14	76	168	258
1884	37	384	10.4	68	218	3.2	..	11	..	39	113	2.9	145	129	377	651
1885	31	390	12.6	44	326	7.4	2	10	5.0	28	85	3.0	112	116	163	391
1886	13	351	27.0	61	317	5.2	2	12	6.0	10	68	6.8	175	90	328	593
1887	22	615	28.0	74	411	5.6	..	2	..	10	50	5.0	58	153	315	526
1888	25	643	25.7	89	426	4.8	12	59	4.9	34	152	4.5	115	81	157	353
1889	32	1047	32.7	66	395	5.9	..	..	..	11	66	6.0	86	153	263	502
1890	33	984	29.8	58	348	6.0	..	..	..	16	64	4.0	52	47	185	284
1891	28	895	31.9	70	396	5.6	..	..	..	21	103	4.9	110	121	180	411
1892	43	1163	27.0	36	205	5.6	..	..	..	30	76	2.5	118	117	158	393
1893	82	1511	18.4	68	490	7.2	5	53	10.6	15	81	5.4	25	59	358	442
1894	51	1164	22.8	62	363	5.8	4	59	15.8	18	56	3.1	134	118	134	386
1895	51	1250	24.5	55	461	8.3	..	3	..	11	47	4.2	1	33	444	478
1896	27	731	27.1	75	478	6.4	..	..	..	12	60	5.0	203	91	175	469
1897	34	517	15.2	45	428	9.5	..	..	..	21	75	3.6	49	117	530	696
1898	32	931	29.1	54	423	7.8	..	..	..	23	85	3.7	104	59	385	548
1899	53	2500	47.2	114	613	5.4	..	..	..	30	142	4.7	140	54	600	792
1900	55	1394	25.3	75	505	6.7	..	..	..	28	116	4.1	45	103	387	535
1901	11	918	83.5	79	535	6.8	..	7	..	29	115	3.97	96	96	361	553
1902	23	966	42.0	50	375	7.5	..	..	..	31	209	6.74	4	37	194	235
1903	34	1420	41.8	36	200	5.6	2	152	76.0	60	423	7.05	98	92	166	356

* Notification of Small-Pox and Scarlet Fever, from February, 1882.

† Notification of Enteric Fever and Typhus, from June, 1883.

‡ Notification of Diphtheria, from August, 1885.

GENERAL DISEASES, etc.

The deaths occurring in the City during 1903 are set out in detail under separate headings and in age-periods in table 3 (p.p. 8 to 12 *ante*). This table has been somewhat modified of late to bring the description and classification of diseases and other death-causes into line with modern medical knowledge, but this modification has not been of character or extent to interfere with the institution of a just comparison between current and past facts and figures. In this section, however, it must be understood that I have only dealt in detail with those death-causes which seem to call for special notice.

The deaths attributed to **syphilis**, 18 in number, were again altogether too few to constitute a true measure of the fatal mischief wrought by this disease. Seventeen were those of children in the first year of life, cut off by the sins of their parents. There were no deaths certified as due to **gonorrhœa**, notwithstanding that the disease, mostly acquired in youth, is a fertile source of trouble, by secondary complications affecting the urinary system—especially in the male sex—during the later years of life.

The deaths put down to **Erysipelas**, **Puerperal Septicæmia**, and **Septicæmia** numbered 4, 13 and 25 respectively. The first were considerably below, but the second and third somewhat above the average of other recent years. The total number of deaths from these kindred causes, moreover, works out at a figure slightly above the average total of the past 5 years.

Acute Rheumatism and Rheumatism of the Heart were certified as the death-causes in 19 cases. This number, though still certainly not representing the entire mortality from acute rheumatism, is higher than the totals of other recent years. Sixteen out of the 19 deaths were between the 10th and 50th year of age.

The total number of deaths returned as due to this cause during 1902 was 16, and the average for the preceding 5 years, 15.

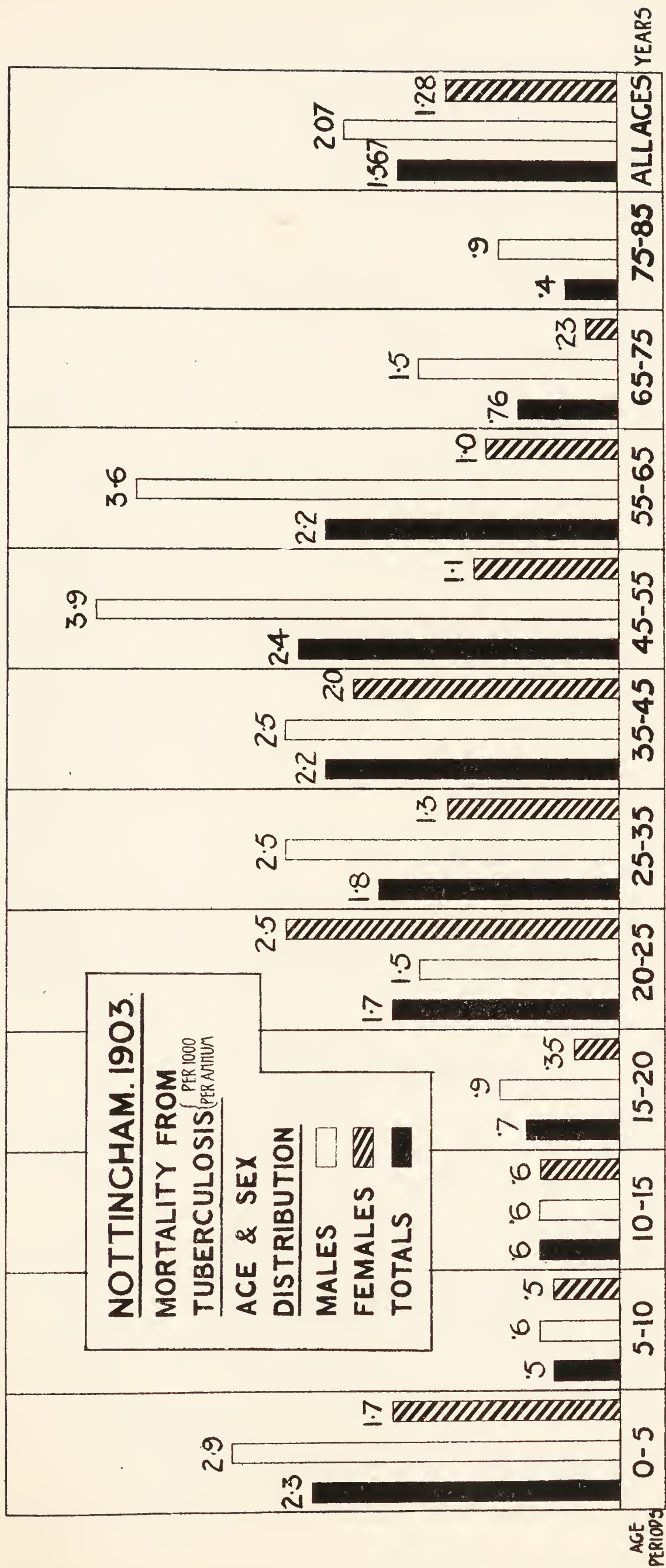
Phthisis and other Tuberculous Diseases.

The total number of deaths ascribed to tuberculous diseases in Nottingham during 1903, without correction, was 414, as against 410, 433 and 481 for 1902, 1901 and 1900 respectively, and an annual average of 436 for the ten years ended with 1901. The range covered by the annual totals of the past 12 years has been comparatively narrow—between 401 (1899) and 481 (1900)—and it would have been more limited even than this, but for the disturbing influence of epidemic influenza.

. Classified as far as possible by the regions of the body affected in fatal cases, the deaths were as under:—

Tuberculosis of brain, 32 deaths:—5 under 1 year, 18 between 1 and 5 years, 4 between 5 and 10 years, 1 between 25 and 35 years, 1 between 35 and 45 years, 3 between 45 and 55 years.

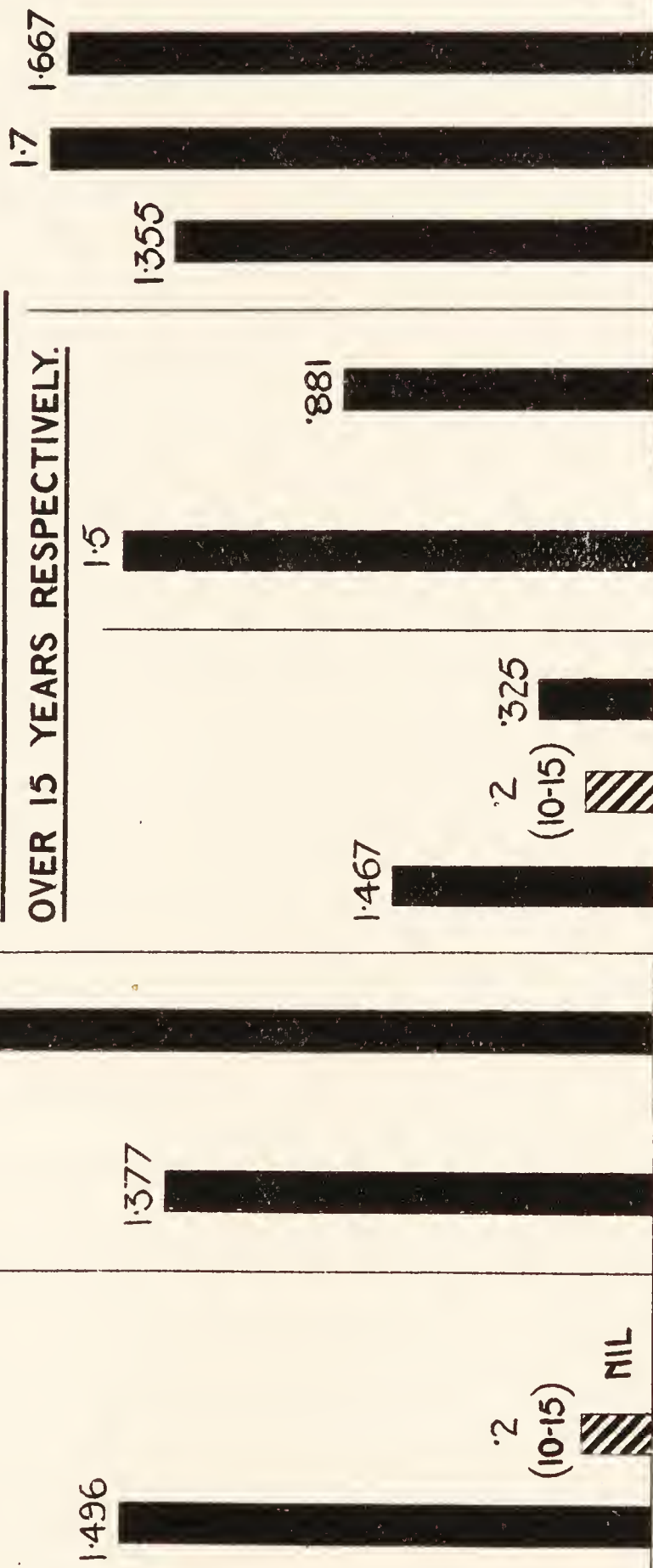
Tuberculosis of lung (phthisis), 302 deaths:—7 under 1 year, 9 between 1 and 5 years, 1 between 5 and 10 years, 8 between 10 and 15 years, 19 between 15 and 20 years, 32 between 20 and 25



NOTTINGHAM. 1903.

(PER 1000
PER ANNUM.)

MORTALITY FROM TUBERCULOSIS
AMONG OCCUPIED & UNOCCUPIED
PERSONS OF EACH SEX UNDER &
OVER 15 YEARS RESPECTIVELY.

[illegible]

years, 67 between 25 and 35 years, 74 between 35 and 45 years, 48 between 45 and 55 years, 30 between 55 and 65 years, 6 between 65 and 75 years, and 1 between 75 and 85 years.

Tuberculosis of abdomen (bowels and other abdominal organs), 43 deaths:—19 under 1 year, 12 between 1 and 5 years, and 6 between 5 and 15 years.

NOTTINGHAM, 1903.
Mortality from Tuberculosis in Age periods.

Age Periods ..	0—1		0—5		5—10		10—15		15—20		20—25		25—35		35—45		45—55		55—65		65—75		75—85		All ages.	
	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.	No. of Deaths.	Death rate per 1000 living.
Males ..	21	7·4	37	2·9	7	·6	7	·6	12	·9	16	1·5	45	2·5	36	2·5	42	3·9	23	3·6	5	1·5	1	·9	232	2·07
Females ..	16	5·6	22	1·7	6	·5	7	·6	5	·35	25	2·5	27	1·3	34	2·0	13	1·1	8	1·0	1	·2	0	—	164	1·28
Both Sexes ..	37	6·4	59	2·3	13	·5	14	·6	17	·7	41	1·7	72	1·8	70	2·2	55	2·4	31	2·2	6	·8	1	·4	396	1·67
Population ..	5710		26075		24772		23917		25807		24780		39288		31796		22811		14176		7844		2526		245993	

General Tuberculosis, 21 deaths:—9 under 5 years, and 7 between 5 and 25 years.

Other forms of Tuberculosis were fatal in 16 cases, 13 of which were evenly distributed over all the age-periods under the 35th year.

There was a higher mortality among males than females at all the age periods, except the 10 to 15 and 20 to 25 years periods. Above the 45th year the excess of the male deaths above the female was very remarkable. The male deaths above this point numbered 71, the female only 22. The total death-rate for both sexes during the year was equal to 1·68 per 1000, the male rate being equal to 2·07, the female to 1·28. The difference in favour of females is here much greater than usual.

Accompanying this section will be found, once more, tables and diagrams shewing the death-rates from tuberculosis diseases among occupied and unoccupied males and females, and among males and females engaged in various occupations.

The salient facts with respect to the death-rates among occupied and unoccupied males and females respectively in certain age periods, to which I drew special attention in my Report for 1902, are on this occasion once more illustrated. They may be briefly summarized as follows:—

(1) There is a mortality of 1·496 per 1000 among unoccupied males under 15 years, and 0·2 only of this affects those aged from 10 to 15 years. There is no mortality from tubercle among the “industrially” occupied males under 15 years.

(2) There is a mortality of 1·377 per 1000 among unoccupied males over 15 years, and one of 2·408 (or nearly double the former) among the occupied males over 15 years.

NOTTINGHAM, 1903.

TUBERCULOSIS AND OCCUPATION.

POPULATION, DEATHS, AND DEATH-RATES (M. & F.).

	POPULATION.					FIRST QUARTER.						SECOND QUARTER.						THIRD QUARTER.						FOURTH QUARTER.						ENTIRE YEAR, 1903.						TWO YEARS 1902-1903.					
	MALES.	FEMALES.		FEMALES, TOTALS.	TOTAL OF BOTH SEXES.	MALES.		FEMALES.		TOTALS, BOTH SEXES.		MALES.		FEMALES.		TOTALS, BOTH SEXES.		MALES.		FEMALES.		TOTALS, BOTH SEXES.		MALES.		FEMALES.		TOTALS, BOTH SEXES.		MALES.		FEMALES.		TOTAL DEATHS, BOTH SEXES.	TOTAL DEATH RATE.	MALES.		FEMALES.		TOTAL DEATHS, BOTH SEXES.	TOTAL DEATH RATE.
		Deaths.	Death Rate per 1000 per annum.			Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.			Deaths.	Death Rate per 1000 per annum.	Deaths.	Death Rate per 1000 per annum.		
Cabinet Makers, French Polishers, Upholsterers	993	199	37	236	1229	1	4.0	1	3.2	1	4.0	1	3.2	3	12.1	3	9.6	5	5.0	5	4.0	10	5.0	10	4.0
Other Workers in Furniture	801	38	6	44	845	..	..	..	..	..	..	..	..	1	90.9	1	4.8	..	..	..	..	..	..	..	..	..	..	..	..	1	22.7	1	1.23	..	..	1	11.3	1	6		
Workers in Wood and Bark	899	56	6	62	961	1	4.4	1	4.2	1	4.4	1	4.2	2	2.2	2	2.1	3	1.6	3	1.6
Brick, Plain Tile, Terracotta Makers .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Others.. .. .	234	20	17	37	271	..	..	..	..	..	..	..	..	..	..	..	..	..	1	108.0	1	14.7	..	..	..	..	..	..	..	1	27.0	1	3.7	..	..	1	14.0	1	1.8		
Chemists and Druggists	318	60	5	65	383	..	..	..	..	..	..	1	12.6	..	..	1	10.4	..	..	..	..	..	..	..	..	..	..	1	3.1	..	..	1	2.6	3	4.8	..	..	3	3.9		
Chemicals, Oil, Grease, &c.	86	17	2	19	105	..	..	..	..	..	..	..	..	..	..	..	..	1	46.5	..	..	1	38.1	..	..	..	..	1	11.6	..	..	1	9.5	1	5.3	..	..	1	4.8		
Skin, Leather, Saddlery, Harness and Whip Makers, &c.	817	109	29	138	955	1	4.9	1	4.2	1	4.9	1	4.2	2	2.4	2	2.1	5	3.0	5	2.6
Hair, Feathers (Brushes, Brooms)	40	6	5	11	55	1	1	1	1	..	1	1	..	
Dealers in Skins, Leathers, Hides, and Furs	28	3	1	4	32	1	1	..	1	1	..	1	1	..	
Stationery Manufacturers, Paper, Box, and Bag Makers	201	533	201	734	935	1	19.9	1	4.3	1	5.1	1	4.3	1	5.0	1	1.4	2	2.1	3	7.5	2	1.4	5	2.63	
Printers, Lithographers	1578	62	6	68	1646	3	7.5	3	7.2	1	2.5	1	2.4	4	2.5	4	2.4	4	1.3	4	1.2	
Others.. .. .	473	88	52	140	613	1	8.5	1	6.5	1	2.1	1	1.6	2	2.1	2	1.6	
Cotton and Flax	172	580	317	897	1069	1	23.3	1	3.8	1	5.8	1	.9	1	2.9	1	0.6	2	.9	
Silk	88	47	12	59	147	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	67.8	1	27.2	..	..	1	16.9	1	6.8	1	5.7	1	8.5	2	6.8		
Hosiery Manufacturers	2192	2745	1199	3944	6136	2	3.6	2	1.3	2	3.6	2	1.3	1	1.8	1	1.0	2	1.3	2	2.0	2	1.3	5	2.3	3	.75	8	1.3	12	2.73	4	0.5	16	1.3
Lace Manufacturers.. .. .	6925	9150	5551	14701	21626	3	1.7	5	1.4	8	1.5	4	2.3	5	1.4	9	1.7	1	.6	2	.5	3	.6	5	2.9	2	.5	7	1.3	13	1.8	14	.9	27	1.2	22	1.4	31	1.1	53	1.2
Bleachers, Dyers	616	28	10	38	654	1	6.4	..	..	1	6.1	1	6.4	..	..	1	6.1	..	..	..	..	..	..	..	..	..	..	2	3.2	..	..	2	3.0	4	5.2	..	..	4	3.0		
Tailors	977	512	216	728	1705	1	4.1	1	2.3	1	4.1	1	2.3	2	8.2	2	4.6	1	4.2	1	2.3	5	5.1	5	2.9	6	3.1	6	1.8
Milliners, Dressmakers	26	2500	770	3270	3296	2	2.4	2	2.4	1	1.2	1	1.2	1	1.2	1	1.2	4	1.2	4	1.2	9	1.4	9	1.4
Boot and Shoe Makers	970	65	48	113	1083	1	4.1	1	3.7	1	4.1	1	3.7	1	4.1	1	3.7	3	3.1	3	2.8	10	5.2	2	8.8	12	5.5	
Others.. .. .	400	98	33	131	531	..	..	..	..	..	..	1	10.0	..	..	1	7.5	..	..	..	..	..	..	..	..	..	..	1	2.5	..	..	1	1.9	1	1.3	..	..	1	.9		
Food Workers	970	105	15	120	1090	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Food Dealers.. .. .	3751	413	619	1032	4783	2	2.2	2	1.6	5	5.4	1	3.8	6	4.9	3	3.2	3	2.5	2	2.2	2	1.6	12	3.2	1	1.0	13	2.7	19	2.6	2	1.0	21	2.2
Tobacco Manufacture	306	1741	244	1985	2181	2	4.0	2	3.7	1	2.0	1	1.8	3	1.5	3	1.4	5	1.3	5	1.2	
Brewers	337	1	..	1	338	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4.5	..	..		

(3) In the respective cases of unoccupied and occupied females over 15 years the proportional male mortality just mentioned (in 2) is almost exactly reversed. The unoccupied have a death-rate of 1·5 per 1000 and the occupied one of ·881.

If we examine the death-rates of the two sexes, where men and women of similar age and social circumstances are engaged side by side in the same industry, we find invariably, if the figures be large, a difference, and usually a very large difference, in favour of the women. We have striking illustrations of this in the staple local industries of lace and hosiery (1903). The men employed in all sections of the lace trade have a mortality from tuberculosis of 1·8 per 1000 so employed, the women a corresponding rate of only 0·9—or exactly one-half that of the men. Similarly (but even more strikingly) in the hosiery trade, the men have a death-rate of 2·3 per 1000, the women one of 0·75.

It must not be inferred from this that the local male death-rates from tuberculosis are generally very high, but only that the female death-rates are for the most part exceptionally low.

The death-rates in the following two groups of occupations, in which men only are employed, are interesting, both by themselves and in comparison. Large numbers of men are employed in all.

(a) With high tuberculosis death-rates:—Masons, 11·7; painters, 4·3; upholsterers, etc., 5·0; bootmakers, 5·2; costermongers, 7·6; general labourers, 7·4.

(b) With low tuberculosis death-rates:—Messengers, 0·5; gardeners, 0·9; railway servants, 0·5; coal and other like dealers, 1·5; coach builders, 1·0; bricklayers, 1·6; printers and lithographers, 1·3; engine drivers (not on railways), 0·6; pensioners, 0·8.

I have once more to express my obligation to Dr. Aldous Clinch for his assistance in preparing the tables which illustrate this section, as well as in other work of the Health Department during the past year.

In my last Annual Report I expressed regret that Nottingham had proved so backward as compared with other large towns in recognizing the desirability of some form of notification of phthisis. Voluntary notification has been tried and proved of great advantage—to sufferers and their families at any rate—in many large centres of population. There is no apparent reason for supposing it would be otherwise here.

Acute and Chronic Alcoholism were given last year as the death causes in 25 cases, as compared with 34 during 1903, and an annual average of 19 for the preceding 5 years. **Cirrhosis of the Liver**, which is mostly due to alcoholic excesses, was credited with 37 deaths. The number for 1902 was 53, and the average for the preceding 5 years 34. The deaths due to alcoholic diseases are for obvious reasons often otherwise certified.

Cancer, and other forms of malignant new-growth, were the certified cause of 192 deaths, as compared with 223 in 1902, and an annual average of 210 for the 5 years ended with 1902. It is interesting to note that the range in these 5 years was only from 190 (1900) to 225 (1899).

Practically two-thirds of the deaths were those of females.

The causes of cancer are still altogether unexplained, and we cannot gather much comfort from the fact that almost all varieties of warm and cold-blooded animals alike suffer from its attack.

The deaths from **Diabetes mellitus** were given as 27, as compared with 21 during 1902. There has been a slight but steady increase in recent years in the number of deaths attributed to this disease.

Premature Birth was apparently the death cause in 143 cases, as against 161 the year before, and an average of 144 for several years past.

Debility at Birth and Lung-Collapse were given in 127 cases—a very average number.

The same may be said of the deaths from **Congenital Defects**, which numbered 28.

Want of Breast-Milk, Atrophy, Debility, and Marasmus were the accredited causes, so far as I can gather, of some 128 deaths, as compared with 155 the year before, and a preceding annual average for some years past of 200 and upwards.

The cause of the decline in the number of deaths included under this heading is undoubtedly the diminished fatality (for the time being) of diarrhœal diseases.

Old Age, Senile Decay. There were no less than 273 deaths returned under this heading, and 267 of these were between the 65th and 100th year. The annual average of the preceding 5 years was 171.

Infantile Convulsions was returned in 83 cases as the primary cause of death. The number of deaths so certified shews a tendency to decline.

Simple Meningitis and Encephalitis, were certified in 53 cases, 43 of which (as against 44 last year) were under the 5th year. Many of these deaths, doubtless, are due to tubercle.

Apoplexy, Softening of the Brain, etc., were responsible, apparently, for 179 deaths, a number more than 10 per cent. below the average of other recent years.

General Paralysis of the Insane and other Forms of Insanity were credited with only 26 deaths, as compared with an average of 37 for the preceding 5 years. It may be noted that diseases of this class are always more in evidence during years when epidemic influenza is prevalent.

Epilepsy was the death-cause given in 22 cases. The average annual number of the preceding 5 years was 18.

The deaths from **Locomotor Ataxy** and other kindred diseases were 17 in number. This total accords very closely with the average of recent years.

Organic Heart-Diseases were apparently less fatal than usual. The deaths certified as due to these were 340, as compared with 390 the year before, 378 in 1901 and a previous 5 years' average of 375.

Bronchitis, Pneumonia, Pleurisy, &c. The deaths allocated to this group of causes amounted to 728, as against 749 in 1902, 685 in 1901 and an annual average of 769 for the five years ended with 1900. In the absence of such disturbing agents as epidemic influenza, there is seldom a very wide variation from the mean in the number of deaths from these diseases. In influenza years, however, the latter have risen to as many as 899 and 944 (in 1890 and 1891).

Diseases of the Stomach and Gullet, (non-malignant). These were the reputed cause of 55 deaths, as compared with 40 and 50 respectively

in 1902 and 1901. Eighteen were of children under 1 year, a fact suggesting dietetic causation in many cases. Twenty-three were of persons at ages varying from 5 years to 75 years from ulceration of gullet, stomach, or duodenum. The numbers of deaths from ulcer of the stomach vary but slightly from year to year.

Simple Enteritis was given as the cause of 41 deaths, as compared with 39 in 1902. Twenty-five were of children under 1 year and 7 of between 1 and 10 years. The fact that all but 4 of these occurred during the diarrhoea season suggests epidemic origin in the majority.

Appendicitis was credited with 17 deaths, as against 10 and 11 respectively in the two immediately preceding years. Sixteen of these were very evenly distributed between the 5th and 55th years.

Hernia and other Obstructive Bowel Diseases were stated to have caused 33 deaths, against 29 in 1902.

Acute Nephritis and Brights Disease were given in 90 instances, as compared with 94 in 1902 and an average of 105 for the preceding five years.

Diseases (non-malignant) of the Female Organs of Generation. There is a sharp decline in the number of deaths attributed to these diseases. They were only 9 in number, as compared with 25 in 1902 and an average of 20 for the preceding 5 years.

Accidents of Child-birth were alleged as the death cause in 19 cases as compared with 20 in 1902. The ratio of these maternal deaths to the total number (6945) of births is equal to 1 in 366. The ratio for 1902 was 1 in 343.

Unfortunately there was a considerable rise in the number of deaths from **Puerperal septicæmia** (already mentioned above). The number of these deaths was 13 in 1903, against only 8 the year before. If we add these to the deaths from other accidents of child-birth, the ratio rises to 1 in 217, as compared with a corresponding ratio of 1 in 245 in 1902.

The Deaths ascribed to Accidents or Negligence numbered 93. The total for 1902 and 1901 were 106 and 103 respectively, and the average of the preceding 5 years was 113. Of these deaths during 1903, 1 occurred in a coal mine, 7 in the streets from vehicular traffic, 3 on railways, 1 by machinery, 14 by burns and scalds, 7 by poison or poisonous vapours, 1 by chloroform, 11 by drowning, 13 by over-lying in bed (all of infants under 1), 7 by other methods of suffocation (also all of infants under 1), 22 by falls, 4 by accidents unexplained, and 2 by homicide.

There were 31 **Suicides**, 1 between 10 and 15 years, 2 between 15 and 20, 2 between 20 and 25, 4 between 25 and 35, 5 between 35 and 45, 6 between 45 and 55, 9 between 55 and 65, and 2 between 65 and 75.

Four were by poison, 12 by strangulation, 7 by drowning, 6 by cut or stab, and 1 by means undefined.

Uncertified Deaths. These, according to my returns, numbered 25, but are given as 29 by the Registrar-General. The last figure is equal to 0·7 per cent. of total deaths during the year. The corresponding proportion in England and Wales for 1903 was 1·7 per cent., in the 76 towns 1·1 per cent., and in London 0·3 per cent.

Inquests. The number of these held by Mr. C. L. Rothera, B.A., or his deputy, during 1903 was 258, and is equal to 6·2 per cent. of the total deaths. The corresponding number and percentage for 1902 were 271 and 6·5 per cent.

The proportion of inquests to total deaths during 1903 in England and Wales was 6·9 per cent., in the 76 towns 7·9 per cent., and in London 10·2 per cent.

Chart of Meteorology, Births and Deaths in Nottingham during 1903. The usual chart of this description, drawn up under the direction of Mr. Arthur Brown and myself, will be found at the end of this Report. Its scheme remains unchanged from last year.

CITY ISOLATION HOSPITALS, AT BAG- THORPE (BASFORD) AND ON BULWELL COMMON.

The accommodation for cases of infectious disease occurring in the City was extended in the early part of 1903 by the erection of a temporary small-pox hospital upon an open site, some 4 acres in extent, at the northern extremity of Bulwell Common. This hospital, for reasons already explained, has not been satisfactorily completed. It has, nevertheless, with the aid of bell-tents for severe and septic cases, proved extremely useful during the past year. Its full complement of beds—in both wards and tents—is 40.

Total Number of Cases in Hospital, 1903.

DISEASE.	Remaining at end of 1902.			Admitted during 1903.			Total cases during 1903.	Total deaths during 1903.	Case mortality of total cases, 1903.	Days of average residence.		Remaining at end of 1903.
		Recovered.	Died.		Recovered.	Died.				Non-fatal.	Fatal.	
Scarlet Fever	M. 36	36	..	238	194	4	274	4				40
	F. 37	37	..	240	197	2	277	2				41
Total..	73	73	..	478	391	6	551	6	1.09	53	7.9	81
Enteric Fever	M. 9	8	1	3	3	..	12	1				..
	F. 11	10	1	8	7	..	19	1				1
Total..	20	18	2	11	10	..	31	2	6.45	57.3	57.5	1
Diphtheria ..	M. 3	3	..	53	43	8	56	8				2
	F. 5	5	..	74	60	10	79	10				4
Total..	8	8	..	127	103	18	135	18	13.3	30.2	7	6
Small-pox ..	M. ..	..	..	89	73	4	89	4				12
	F. ..	..	..	53	47	1	53	1				5
Total..	..	..	..	142	120	5	142	5	3.5	26.4	4.6	17
Other Cases ..	M. 3	3	..	20	18	..	23	..	..			2
	F. ..	..	..	30	26	1	30	1	..			3
Total..	3	3	..	50	44	1	53	1	..	15.6	9	5
TOTAL	104	102	2	808	668	30	912	32	3.5		8	110

10 Cases sent in as Scarlet Fever wrongly diagnosed.

5	..	Diphtheria	..	..
2	..	Enteric Fever	..	..

The total number of persons admitted to both hospitals, for treatment, quarantine, or other like purpose, during 1903, was 808. The number taken in during the three immediately preceding years were respectively 618, 574, and 785.

The total for 1903 was made up as follows :—Scarlet fever, 478 cases ; enteric fever, 11 cases ; diphtheria, 127 ; small-pox, 142 ; other cases, contacts, etc., 50.

There were 110 cases remaining in hospital at the close of the year ;—81 being of scarlet fever, 1 of enteric fever, 6 of diphtheria, 17 of small-pox, and 5 of other description.

Ten cases sent in by medical men for scarlet fever, 5 for diphtheria, and 2 for enteric fever proved to have been incorrectly certified, and are classed here under the heading of “other cases.”

I must once more explain that the total cases under treatment in hospital during the year include—in addition to those admitted—the number left over from the previous year. There were 104 of these cases ;—73 being of scarlet fever, 20 of enteric fever, 8 of diphtheria and 3 of other complaints. These latter, added to those admitted during the year, raise the total of cases in hospital during the year to 912. The final issue of the 110 cases remaining at the close of 1903 will be dealt with as usual in the next year’s report.

Table shewing the number of Beds occupied during each month of the year 1903.

MONTH.	BEDS OCCUPIED.		MONTH.	BEDS OCCUPIED	
	Highest.	Lowest.		Highest.	Lowest.
January	100	86	July	92	86
February	101	94	August	87	74
March	91	78	September	71	65
April	90	82	October	83	72
May	86	83	November	103	87
June	83	72	December	110	106

**SCARLET
FEVER**

The notifications of reputed scarlet fever cases amounted to 1420, and of these 478, or 33·7 per cent., were removed to hospital. Ten of these subsequently proved to have been incorrectly certified, and all happily were sent home without having contracted the disease during their stay.

The proportion of total cases removed to hospital during each of the three immediately preceding years were, respectively, 52 per cent, 47 per cent, and 49 per cent.

The return cases (or cases occurring in the houses to which hospital patients return after their discharge, within three weeks of such discharge) numbered only 12.

This number is equal to 2·18 per cent of all cases discharged during the year. The corresponding proportion of such cases during 1902 was 3·68 per cent. No return case ended fatally during 1903. The monthly distribution of such cases in the latter year were as follows:—March, 1 case; May, 2; June, 1; July, 2; September, 2; October, 1; December, 3.

The cases of actual scarlet fever admitted during the year numbered 478. Of these 238 were male, and 240 female cases. Of the cases remaining in hospital at the close of 1902, 36 were male, and 37 female cases. Adding the two together, we obtain a total of 551 cases (the ultimate issues of which were decided during the year), made up of 274 male, and 277 female cases. Of the male cases 4, and of the female 2, ended fatally. The male deaths were equal to a rate of 1·46 per cent. of the male cases, and the female to 0·72 per cent of the female.

The total mortality of both sexes was equal to 1·09 per cent. of all cases, and this is the lowest death-rate from scarlet fever recorded in the Nottingham hospital.

The usual details of age and sex distribution, and of complications, will be found in the tables which accompany this section of the report.

Age and Sex Distribution of Non-fatal and Fatal Cases of Undoubted Scarlet Fever under treatment in Hospital during 1903, exclusive of those remaining at the close of the year, but inclusive of those carried over from 1902.

AGE PERIODS.	MALES.		FEMALES.	
	Recoveries.	Deaths.	Recoveries.	Deaths.
Under 1 year .. ..	..	..	..	..
Between 1 and 2 years	11	..	6	..
" 2 and 3 "	13	1	9	..
" 3 and 4 "	15	..	14	1
" 4 and 5 "	16	..	19	1
" 5 and 10 "	77	2	85	..
" 10 and 15 "	37	..	38	..
" 15 and 20 "	29	1	35	..
" 20 and 25 "	24	..	19	..
" 25 and 30 "	5	..	4	..
" 30 and 35 "	3	..	2	..
" 35 and 40 "	0	..	2	..
Over 40 years	0	..	1	..
TOTALS	230	4	234	2

Actual Age at Death in Fatal Cases of Scarlet Fever.

MALES.				FEMALES.			
2 years	..	..	1	3 years	..	..	1
4 "	..	..	1	5 "	..	..	1
10 "	..	..	1				
17 "	..	..	1				

Owing to the fact that only a comparatively small proportion of the cases occurring in the City during the year were removed to hospital, it is impossible to draw any useful inference from age-incidence in the hospital cases. Full particulars of the age-incidence in the total cases which came to my knowledge during the year, will be found under the heading of scarlet fever in the epidemic diseases section of this report.

The table of complications among hospital cases, however, is especially interesting when read in connection with the low case-mortality.

If we compare the proportions of cases in which the more serious complications occurred in the two years 1902 and 1903, we find at once, as indeed we should expect, that the comparison is at all points in favour of the year with the lower mortality. For example, the percentage of cases in which kidney inflammation occurred was 15·3 in 1902 and only 9·0 in 1903. Gland inflammation fell from 32·2 per cent. in 1902 to 24·3 per cent. in 1903; nose inflammation from 25·7 per cent. to 10·0 per cent.; and ear inflammation from 7·4 per cent. to 5·5 per cent.

Complications among Scarlet Fever Cases during 1903.

COMPLICATIONS.	Cases affected.	Percentage of all Cases.
Quinsy	9	1·8
Nephritis	43	9·0
Pharyngitis	7	1·4
Adenitis	116	24·3
Rhinitis	48	10·0
Otitis	26	5·5
Chicken Pox	4	0·8
Heart Complications	16	3·4
Bronchitis	22	4·6
Arthritis.. .. .	14	2·9
Secondary Rash	21	4·4
Delirium	1	0·2
Chorea	2	0·4
Herpes	3	0·6
Diphtheria	4	0·8
Ophthalmia	10	2·1
Meningitis	2	0·4
Pneumonia	5	1·0
Phlebitis.. .. .	1	0·2
Erysipelas	1	0·2
Abscess—Cervical	10	2·1
" Leg	1	0·2
" Post-Auricular	2	0·4
" Arm	1	0·2
" Axilla	1	0·2
" Buttock	1	0·2
" Mastoid	1	0·2
" Iliac	1	0·2
Measles	3	0·6

I have said that we should expect a falling case death-rate (with a disease like scarlet fever) to be accompanied by a declining complication rate, and such an expectation is strictly reasonable, but I may observe that it is not always realized, and the case of the year 1902 may be cited as one presenting several exceptions in this respect.

Owing to the extraordinary decline in the number **ENTERIC FEVER.** of enteric fever cases occurring in the City during 1903 as compared with other recent years, and the fact that the General Hospital is now prepared to accommodate as many as 20 enteric fever patients at one time, there were only 31 cases of this disease under treatment at Bagthorpe during the year, and 20 of of these were in hospital at the close of 1902.

Of the 31 cases under treatment in the City Hospital during 1903, 28 were discharged during the year with convalescence well established, 2 ended fatally, and one remained in hospital at the close of the year.

Age and Sex Distribution of Cases of Enteric Fever under treatment in Hospital during 1903, including those left over from 1902, but excluding those remaining at the end of 1903.

AGES.	MALES.		FEMALES.	
	Recovered.	Died.	Recovered.	Died.
Between 5 and 10 years .. ..	..	1	3	1
" 10 " 15 " 	2	..	1	..
" 15 " 20 " 	1	..	3	..
" 20 " 25 " 	3	..	6	..
" 25 " 30 " 	3	..	2	..
" 30 " 35 " 	1	..	..	..
" 35 " 40 " .. ..	..	..	..	..
Over 40 years	1	..	2	..
TOTALS ..	11	1	17	1

TOTAL CASES, 30.—Deaths, 2. *Total case mortality, 6·7%.*

MALE CASES, 12.—Deaths, 1. *Total case mortality, 8·3%.*

FEMALE CASES, 17.—Deaths, 1. *Total case mortality, 5·5%.*

Cases remaining in Hospital at end of 1903—1 Female.

The 30 cases are made up as follows :—

20 remaining at end of 1902.
11 admitted during 1903.

31
1 remaining at end of 1903.

30

In the fatal cases death was due to :—

Hæmorrhage, 1.
Cerebral Abscess and Pulmonary Embolism, 1.

The total case mortality was equal to 6·7 per cent. Twelve of the cases were of males, and of these one (æt 5—10) ended fatally; the male case mortality, therefore, was equal to 8·3 per cent. Eighteen of the cases were of females, and one of these, also, in the same (5—10 years) age-period, had a fatal termination; the female case-mortality was consequently equal to 5·5 per cent.

The number of cases of enteric fever nursed in hospital during the year was altogether too small to afford ground for any general inferences; but it may be noted that the tendency to a fatal issue is much less in the early years of life than later on, and, therefore, that the above deaths of young children in a group principally made up of older people, does not represent the normal, but may be described as an accident of small numbers. The maximum mortality among enteric fever cases is commonly observed between the 20th and 30th years.

DIPHTHERIA.

The cases of diphtheria admitted to Bagthorpe Hospital during 1903 numbered 127. Six of these remained in hospital at the end of 1903, and will be finally dealt with in the report for the current year; eight others had been carried forward from 1902, and must be added to those admitted during 1903 to obtain the total under treatment in the latter year.

In dealing with the epidemiology of the disease, I have already mentioned that the cases were distributed over the year with unusual evenness. In consequence of this even distribution in time, the numbers of cases admitted at intervals to hospital, and the numbers of beds occupied throughout the year, were also remarkably uniform. The total number admitted was 127, the monthly average of admissions was 12, the highest monthly total was 14, admitted in each of the months, July, August, and October, and the lowest, 5 in December.

There is little to be learnt from a study of age incidence, where, as in this instance, the cases are less than one-third of the total number which occurred during the year. The other particulars, however, dealt with in the accompanying tables, are not vitiated by this fact.

Age and Sex Distribution of Cases of Diphtheria under treatment during 1903, including those left over from 1902, but excluding those remaining at end of 1903.

AGES.	MALES.		FEMALES.		Monthly Admissions.
	Recovered.	Died.	Recovered.	Died.	
Under 1 year ..	..	..	..	..	Jan. 11
Between 1 and 2 years	2	2	3	1	Feb. 7
" 2 and 3 "	2	3	4	1	March 10
" 3 and 4 "	8	..	7	1	April 7
" 4 and 5 "	6	1	12	2	May 10
" 5 and 10 "	21	2	16	4	June 11
" 10 and 15 "	4	..	17	..	July 15
" 15 and 20 "	1	..	1	1	Aug. 14
Over 20 years ..	2	..	5	..	Sept. 11
					Oct. 14
					Nov. 12
					Dec. 5
TOTALS	46	8	65	10	127

TOTAL CASES, 129.—Deaths, 18. Case mortality, 13·9%.

MALE CASES, 54.—Deaths, 8. Case mortality, 14·8%.

FEMALE CASES, 75.—Deaths, 10. Case mortality, 13·3%.

The 129 cases are made up of—
8 from 1902.
127 admitted during 1903.

135
6 left over at end of 1903.

129

Of the deaths, one was due to Laryngeal Obstruction, one to Pneumonia, one to Convulsions, one to Sloughing Phagedæna, and fourteen to Syncope.

Of the cases of Diphtheria admitted, fourteen were complicated with Scarlet Fever Infection, one with Chicken-Pox, and one with Measles.

The cases finally dealt with numbered 129, and 18 ended fatally; the total case mortality was therefore equal to 13·9 per cent. The male cases numbered 54, and the male deaths 8; the male case mortality was therefore equal to 14·8 per cent. The female cases were 75 in number, and deaths 10; the female case mortality was consequently equal to 13·3 per cent.

These figures are too small to be of much significance, but it may be noted (*a*) that, while the infantile mortality is very high (60 per cent.), there is, contrary to the usual rule, a low death-rate among cases in the 4th year, (*b*) that, excepting the 5–10 years period, the female mortality is rather below the male—another fact contrary to common experience—and (*c*) that the deaths (14) due to paretic syncope are exceptionally numerous.

There was a case mortality of 14·2 per cent. among the 296 cases nursed at home, as compared with one (already given above) of 13·9 for those in hospital. It is only fair to the hospital to say that at least 4 of the cases sent in were practically moribund at the time of admission.

All cases of acute diphtheria admitted during the year were treated with antitoxic serum on admission. This serum also was largely distributed from the Health Department to medical men in attendance upon diphtheria cases among the poor.

Dr. Jacob, the City Bacteriologist, was called upon to examine specimens from 214 separate cases of diphtheria and reputed diphtheria during the year. There is no disease in which the value of bacterial aid to diagnosis is better illustrated than diphtheria.

Table showing monthly admissions of Cases of Scarlet Fever, Enteric Fever and Diphtheria, together with the monthly numbers of return cases of Scarlet Fever during 1903.

MONTHS.	CASES ADMITTED.					Return Cases of Scarlet Fever.
	Scarlet Fever.	Enteric Fever.	Diphtheria.	Small-Pox.	Other Cases.	
January	33	1	11	30	4	—
February	34	1	7	13	4	—
March	36	1	10	18	7	1
April	34	—	7	6	2	—
May	40	1	10	12	5	2
June	31	—	11	5	2	1
July	50	1	14	24	3	2
August	28	—	14	2	—	—
September	41	—	12	—	2	2
October	44	—	14	—	—	1
November .. .	52	6	12	10	4	—
December	55	—	5	22	17	3
TOTALS	478	11	127	140	50	12

I have already dealt fully with the subject of the **SMALL-POX.** small-pox outbreak in the special section on small-pox in this report (pp. 33 to 44). I shall content myself here, therefore, with the statement of a few bare details affecting the hospital. Out of the 152 cases described in the small-pox section, only 142 cases were in such a stage of disease at the time they came to my notice as to require removal to hospital. These were taken in, and remained on an average 26·4 days in non-fatal, and 4·6 days in fatal cases. Five persons died in the hospital wards. These were: (*a*) two unvaccinated males æt. 32 and 4 years respectively, who died of small-pox (confluent vesicular); (*b*) two males, one vaccinated in infancy, the other unvaccinated, æt. 53 and 66 respectively, who died, the one of lung and heart disease the other of hemiplegia, to which they were already succumbing when attacked with small-pox; and (*c*) the premature female infant of a mother suffering from small-pox, which died as a result of untimely birth.

The following table furnishes particulars of “other cases” already referred to, which were admitted upon erroneous notification certificates or otherwise during 1902:—

Table of “Other Cases” admitted during 1903.

7 Female cases	}	wrongly diagnosed as Scarlet Fever.
3 Male ,,		
1 Female ,,		Quinsy (on Staff of Hospital).
14 Male ,,	}	Small-Pox contacts.
16 Female ,,		
(1 Female S.P. contact, æt. 2 days, died of convulsions).		
2 Male ,,		wrongly diagnosed as Enteric.
1 Female ,,		Cellulitis of Leg (on Staff).
4 Female ,,	}	wrongly diagnosed as Diphtheria.
1 Male ,,		
1 Male ,,		Hæmophilia, following Vaccination.

**EXPENDI-
TURE.**

The gross total expenditure on the Bagthorpe General Isolation hospital during the 12 months ended with March 31st, 1903, is given by the City Accountant as £6,856, and that upon the Bulwell small-pox hospital, and the quarantine section at Bagthorpe, as £926. If we deduct from each of these, half the sum (£225) received for the maintenance of patients, etc., we obtain net totals of £6,743 10s. and £813 10s. respectively.

The cost per bed worked out upon these figures amounts (*a*) for the hospitals as a whole, to £63 1s. 0d.; (*b*) for the general isolation hospital at Bagthorpe, to £74 18s. 0d.; and (*c*) for the small-pox hospital at Bulwell and its quarantine dépendence at Bagthorpe, to only £27 2s. 0d. But I must point out that the allocation of expenditure here made is by no means fair to the Bagthorpe establishment, as the cost of maintaining the male staff, horses, ambulances, disinfecting apparatus, and special laundry, for the use of the small-pox section, is all charged to the Bagthorpe account.

With these sources of error in view, I think it safer to accept the first figure given above (£63 1s. 0d. per bed) as the approximate cost per bed for the small-pox section, as well as for the general isolation hospital.

The cost per patient, again estimated upon the same statement of expenditure, is as follows: (*a*) for the isolation hospitals as a whole, £8 5s. 8d.; (*b*) for the general isolation hospital at Bagthorpe, £8 15s. 2d.; and (*c*) for the small-pox hospital at Bulwell and its dépendence at Bagthorpe, £5 4s. 6d.

Dr. G. W. Procter, who was appointed Resident Medical Officer of the hospital in 1901, retained the office and performed the duties attaching thereto in a highly satisfactory manner down to the close of the year, when he resigned in order to take up

private practice. Dr. E. W. Rees Jones, a gentleman with an excellent professional record, was appointed in his place. Miss Helen Wallace still continues to fill the office of matron in an entirely acceptable manner.

Handbills, Leaflets, &c. (*Distributed from the various sections of the Health Department.*)—Leaflet literature, relating to (a) the feeding and care of infants, (b) the prevention of diarrhœa and cholera, (c) the advisability of vaccination in view of the prevalence of small-pox, (d) the prevention of tuberculous consumption, (e) the care of scarlet fever patients discharged from Fever Hospitals, (f) the provisions of the Shop Hours Acts, and (g) the Home Office requirements as regards “sanitary accommodation” in factories, will be found reprinted in Appendix A of this Report.

Municipal Laboratory of Bacteriology.

—Dr. Jacob furnishes the following report of work done during 1903:—

Particulars of Material received for Examination.

(a) In connection with Food Inspection.

1. Specimens from sheep and cattle	-	-	40
„ fish	-	-	2
			<hr/> 42 <hr/>

(b) In connection with Human Cases of Tuberculosis or suspected Tuberculosis.

1. Specimens examined for tubercle bacilli, with a positive result	-	-	75
2. Do. do. with a negative result	-	-	102
			<hr/> 177 <hr/>

(c) In connection with Human Cases of Diphtheria, or suspected Diphtheria.

1. Specimens (throat swabs) examined for bacillus diphtheriæ, with a positive result	-	-	-	-	-	96
2. Do. do. with a negative result	-					118
						<hr/> 214 <hr/>

(d) In connection with Human Cases of Enteric Fever.

Widal's reaction—

1. Positive result	-	-	-	-	51
2. Negative result	-	-	-	-	55
					<hr/>
					106

Disinfecting Department.—An additional responsibility was thrown upon the management of this department during the past year by the invasion of small-pox. The City is provided with only two disinfecting stations and steam disinfecting apparatus, and a limited staff; but this department, nevertheless, is called upon to deal with particulate infections as various as those of pediculosis and small-pox. Its work, too, must be done—if things are to go smoothly and the public are not to suffer—in the first place, without undue damage to the material dealt with, and in the second, without the production of cross infection. During the past year, notwithstanding the continual strain entailed by the presence and repeated fresh introduction of small-pox in the poorest parts of the City, and the occurrence of more than the average amount of scarlet fever and diphtheria, no single accident of the last kind has been even suspected, either by ourselves or the public; and in the case of small-pox at least, I can assert, without fear of contradiction, that such an accident would be at once apparent should it happen.

With regard to the question of damage to articles disinfected by steam, it is I think desirable once more to explain, that, while steam or boiling water are practically the only disinfecting agents (in our case) at once available and effective, their employment necessarily entails a certain amount of damage to most of the articles subjected to their influence. Such damage represents the minimum cost, under existing circumstances, at which freedom from infection can be secured.

Articles Disinfected at the Public Stations in Nottingham, 1892-1903.

	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Bedding ..	6735	8521	2943	10990	8822	4483	7550	22385	14582	12758	13002	13765
Clothing ..	10253	11266	20579	12652	9012	4768	5554	14605	10517	9403	3785	9707
Furniture & Hngngs. }	439	726	1541	1277	2184	1382	2130	2722	2397	3257	4455	2828
Miscells. Articles }	13319	10573	10303	13272	8394	8341	7699	14093	9498	9410	11498	12204
TOTAL ..	30746	31086	35366	38191	28392	18974	22933	53805	36994	34828	32740	38504

*** Houses and other premises disinfected—1,977.**

The usual table of articles disinfected at the Public Stations during the past year is given above. It will be seen that the total number of such articles during 1903 was 38,504, and greater by 5,764 than in 1902.

Mr. F. G. Williams, the chief infectious diseases inspector, is responsible for the work of this department.

The Mortuaries. There are three public mortuaries in use in the City at the present time: (1) the Leen-Side Mortuary, at the rear of the new Leen-Side Police and Fire Station at the London Road end of Leen-Side; (2) the Hyson Green Mortuary attached to a similar establishment on the Boulevard at Hyson Green (both of these are

* Houses disinfected for scarlet fever, 1,161; for diphtheria, 376; for enteric fever, 171; for small-pox, 104; for other diseases, 165.

thoroughly well built and well appointed public mortuaries, provided with proper accommodation for the Coroner and facilities for the performance of post-mortem examinations); (3) a small adapted building at the rear of the Bulwell Police Station. Details of the admission of bodies during each month of the year are furnished in the table below. There was an increase of 4 at Leen-Side, and of 23 at Hyson Green, and a decrease of 2 at Bulwell, as compared with the respective numbers for 1902. The total number of bodies dealt with during 1903 was 255, as against 230 in 1902.

Number of Bodies, Male and Female, taken into each of the Public Mortuaries during each month of the year 1903.

MONTH.	LEEN SIDE.		HYSON GREEN.		BULWELL.		TOTAL.
	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.	
JANUARY	11	9	8	6	0	0	34
FEBRUARY .. .	3	4	5	2	1	1	16
MARCH	9	6	5	6	0	2	28
APRIL	8	6	7	4	2	1	28
MAY	7	3	7	5	0	0	22
JUNE	9	3	7	3	0	0	22
JULY	7	4	3	1	0	1	16
AUGUST	5	6	7	0	0	0	18
SEPTEMBER .. .	3	6	3	2	0	0	14
OCTOBER	11	2	8	4	0	0	25
NOVEMBER .. .	3	2	4	3	1	1	14
DECEMBER .. .	1	1	13	3	0	0	18
	77	52	77	39	4	6	255

The Public Lavatories of the Town
now in use are situated as follows:—

FOR MEN—Parliament Street (underground).

Milton Street (do.)

Gedling Street.

Shambles.

Carrington Street Bridge.

Trent Bridge.

FOR WOMEN—Milton Street (underground).

Gedling Street.

Shambles.

Trent Bridge.

These public conveniences are well-appointed and well-managed, but the extent to which they are utilized by the public is very unequal.

Common Lodging Houses.—There were 53 of these houses upon the City Register at the close of 1903, one new house having been opened and none closed during the year. Two transfers only were applied for, and both were granted. Seven double beds in two houses were removed, and replaced with single ones. It is certainly desirable in the interests of decency, morality, and good order, though perhaps at present impracticable, that all double bed accommodation in these houses should be abolished. The total bed accommodation upon our register is now sufficient for 1060 persons, the net accommodation having been increased by 16 beds since the close of 1902. Each of the houses was lime-washed and cleansed throughout both in April and October, as required by the Public Health Act of 1875.

The following tables give the situation of the houses and details of their accommodation.

Common Lodging Houses. Situation :—							
In Narrow Marsh	..	..	..	..	..	..	41
" Millstone Lane	..	..	..	..	..	..	1
" Canal Street and Leen Side	..	..	..	..	..	..	4
" Main Street, Bulwell	..	..	..	..	..	..	2
" Portland Place, Coalpit Lane	..	..	..	..	..	..	1
" Water Street	..	..	..	..	..	..	1
" Washington Street	..	..	..	..	..	..	1
" North Church Street	..	..	..	..	..	..	1
" Popham Street	..	..	..	..	..	..	1

Common Lodging Houses. Accommodation Data, 1903.

For Males only.	For Females and Married Couples.	For Females only.	Mixed Houses.	TOTAL.
22	15	1	15	53

	No. of Houses.	BED ACCOMMODATION.						Registered amount of bed accom- modation for lodgers.
		Less than 10 beds.	10 to 20.	21 to 30.	31 to 40.	41 to 50.	51 to 60.	
Houses on Register, 1902..	52	7	25	14	4	2	1	1,043
New House opened ..	1	..	1	..	..	..	..	17
Houses on Register at end of 1903	53	..	..	..	..	..	..	1,060

The two Corporation Lodging Houses, that for men only in Popham Street, containing 28 beds, and that for women only in North Church Street, containing 20 beds, have both had satisfactory records in all respects during 1903.

Situation of lodging house.	No. of beds.	No. of Lodgers admitted in each of the years.									
		1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
Popham Street...28 (Men only.)		7,813	7,492	7,331	6,568	6,608	6,792	7,965	8,262	9,282	9,194
Parliament St...20 Formerly, now North Church St. (Women only.)		5,555	5,663	6,252	6,374	6,422	7,053	*3,603	3,612	4,631	5,123
		13,368	13,155	13,583	12,942	13,030	13,845	11,568	11,874	13,913	14,317

* House closed July 14th to December 24th.

The Popham Street house received 88 less men than in 1902, but as the number for that year was exceptionally large, being no less than 1020 in advance of the 1901 total, the 9194 admissions of 1903 may be accepted as entirely satisfactory.

The North Church Street house received 5,123 women, an advance of 492 upon the number for 1902.

The aggregate of admissions to these two houses is the largest since 1893.

In my Report for 1902 I advocated the introduction into our houses of single cubicles, such as one sees in the Rowton Houses and other like establishments, to meet the requirements of better class nomads. I also suggested the tentative establishment in the Corporation houses of refreshment departments, to save lodgers the necessity of going out to buy their meals and other refreshments.

The experimental trial of these suggestions would involve no great outlay, and I am strongly of opinion that the result would be successful, both morally and financially.

Six cases of small-pox occurred in common lodging houses during the year, and Mr. G. A. Read, Cert. San. Inst., the Inspector of these houses, has been at once most assiduous and successful in his efforts to obtain information respecting cases and to secure compliance with the regulations for preventing the spread of infection.

Housing of the Working Classes Acts 1890 and 1900, Insanitary Dwellings and Areas.—During the past year I have certified fifty-one houses as unfit for habitation (under Section 30, Part II of the Act of 1890.) These houses had the following situations:—

15, Blyth Street, Mapperley.

29, and 31, Tyler Street, Platt Street.

2, 4, 6, 8, 10, 12, 14, 16, 18, Vassal Street, Southwell Road.

3, and 7, White Street, and Carter Gate.

8, 10, 12, 14, 16, 18, and 20, Pinder Street, Poplar.

1, 3, 5, 7, 9, and 2, 4, 6, 8, 10, 12, 14, Brewery Street, Poplar.

1, 3, 5, 7, 9, and 2, 4, 6, 8, and 10, Wharf Street, Poplar.

1, 2, 3, 5, 6, 7, 8, and 9, Leather Street, Poplar.

The first house on the list has been closed, the next thirteen have been repaired or reconstructed, and proceedings to obtain closing orders for the rest are now pending before the local magistrates.

In addition to these, 170 houses have been repaired or cleansed without recourse to the provisions of the Housing of the Working Classes Acts.

Having already dealt at some length in previous reports with the difficulties of the so-called housing problem, as they present themselves in Nottingham and other like places at the present time, I shall here give only a short account of tentative measures recently adopted in this department for securing an improvement in the condition of dirty houses and households. Two of the newly appointed inspectors have been detailed to make house-to-house visitation in certain poor neighbourhoods, in order to obtain definite information respecting the conditions of the house interiors. Houses absolutely unfit for habitation are certified (after inspection) by myself, forthwith; but, in the case of those which are simply filthy or otherwise insanitary for lack of cleansing or decent maintenance, a notice is served on owner or tenant according to the respective responsibility of either for the objectionable condition discovered, requiring the systematic "whitewashing, cleansing or purifying" of the interior, according to the special needs of each particular case. The result of this work has up to the present been excellent. Several negligent owners and agents have come to realize the necessity of keeping

their houses in more sanitary condition than heretofore, and many careless and dirty tenants have also begun to understand that, unless they are prepared to shew a proper respect for their landlord's property, they may find it a very difficult thing in future to obtain a home in the town. We must not lose sight of the fact that in very poor neighbourhoods this latter class of tenants constitute one of the chief obstacles to housing reform, and it may be that the fear of consequences so tangible and unpleasant as this suggested boycott, will exert an educational influence upon them more potent than simple moral suasion.

Canal Boats Acts, 1877 to 1884; and Regulations, 1878.—Mr. F. W. Franks, Cert. San. Inst., Inspector of Canal Boats for the City of Nottingham, reports that he has paid 82 separate visits to the canals and other navigable waters within the City during the year, and that he has examined 143 boats altogether on these occasions. He has paid his visits to the canals at more or less regular intervals, and at various times during the daily period (6 a.m. to 9 p.m.) laid down by the Acts. He has been allowed free access to the cabins and other parts of the boats he desired to inspect on all occasions. All the cabins inspected by him were in a clean and otherwise satisfactory condition, with the exception of those mentioned below.

The 143 boats inspected carried, between them, 7 women, 5 children from 5 and 12 years of age, and 2 under 5 years.

Infringement of the Acts and Regulations were discovered in 4 instances, and were as follows:—

Wrong numbering of boat	-	-	1
Want of painting	-	-	1
Dilapidation of cabin	-	-	2

Notices served upon the owners to repair these defects were at once complied with.

No case of infectious disease was reported or discovered upon any boat in the City during the year, nor was it necessary to detain any boat for cleansing or disinfection.

One fresh boat has been registered during the year, and one old boat registered anew on account of structural alterations.

Change of ownership has been reported in one instance and the certificate altered accordingly.

I may add that H.M. Inspector of Canal Boats has expressed to me his satisfaction with the manner in which the inspection of canal boats is carried out in Nottingham.

Factory and Workshop Acts, 1891-1901

—The duties of local authorities under these Acts are now both numerous and important.

Mr. F. J. Parkes, H.M. Factory Inspector for this district, has sent us during the year official information (under Sec. 5 F.W. Act, 1901) of 12 alleged sanitary defects in factories. All these have been carefully investigated by the local inspectors, and any necessary alterations effected. Mr. Parkes has also been notified of these alterations.

As Medical Officer of Health for this City, I am required (under Sec. 133 of the Act of 1901) to send written notice to H.M. Inspector for the district of any case coming to my knowledge of the employment of a child (under 14), or young person (14 to 18), or woman, in any workshop. Twenty-six cases of such employment have come to my notice, as usual, principally by the agency of Mr. Flint or Mrs. Exton, the local inspectors. All have been notified without delay to Mr. Parkes.

Now, with regard to underground bakehouses. Until quite lately most persons concerned appeared to find the wording of the Act of 1901 as it affects underground bakehouses sufficiently clear and precise, but the extraordinary misconceptions concerning the purport of its provisions, which have lately been expressed, appear to suggest the advisability of reproducing the following explanatory passages from the Home Office Memorandum on the subject:—

“After first January, 1904, that is, after a period of two years from the coming into force of the Act, it will not be lawful to use any underground bakehouse (whenever established) unless the (District) Council are satisfied that it is suitable for the purpose in regard to construction, light, ventilation, and in all other respects, and have given it a certificate of suitability. This provision will apply to all bakehouses, whether wholesale or retail.”

“Every bakehouse will be deemed an underground bakehouse if any room used for baking, or for any process incidental thereto, is so situate that the surface of the floor is more than 3 feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room.”

“And that an underground bakehouse used in contravention of these provisions will be deemed to be a workshop not kept in conformity with the Act.”

With a clear conception of our duties in this matter, we had already scheduled the underground bakehouses of Nottingham, to the number of 105, before the close of 1902. On further inquiry in the Spring of 1903, however, it was found that applications for certificates would be made in only 95 cases. The list was, therefore, reduced by 10, and inspection commenced without delay.

Every bakehouse was visited and carefully examined, and the question of granting or refusing a certificate in most cases considered and decided on the spot. The work proceeded so expeditiously that before the end of the summer the whole list had been finally considered. The ultimate decision to which the Committee came, was, that certificates should be granted after necessary alterations in 46 cases, and refused (on account of the irremediable unfitness of the premises) in 49 cases.

Of the first list it is satisfactory to report that only one bakehouse remains in which no attempt has been made to meet the Committee's requirements in the way of structural alteration.

Of the second, I have to say that eight still remain in use, and with regard to several of these proceedings are now pending before the local magistrates.

In respect of "Home Work" in (*a*) unwholesome and (*b*) infected dwellings, the following action has been taken under Secs. 107—115, F. W. Act, 1901:—

(*a*) UNWHOLESOME DWELLINGS.

Fourteen notices have been served upon employers during the year, forbidding the giving out of work to be done in such dwellings. These notices have all been complied with.

(*b*) INFECTED DWELLINGS.

The letting out of work to persons resident in such houses has been stopped in some hundreds of cases, by the responsible employer, on receipt of a notification from the Health Department.

I may mention incidentally here that a large amount of dressed lace and hosiery found in houses where cases of small-pox occurred during the year, was quite unavoidably damaged to some extent in the process of disinfection by steam, but that the owners of the material in almost every instance took the spoiling of their goods in the best possible spirit. I mention this by way of acknowledgment of the kind assistance we have received from many firms in our efforts to prevent the spread of infection—and especially the infection of small-pox.

Lists of Out-Workers.—The provisions of the Act with regard to the keeping and forwarding of lists of out-workers are still apparently not quite

clearly understood. I therefore reproduce the following passage from the Home Office Memorandum, the import of which is, I think, abundantly plain:—

“In order that the (District) Council may be kept fully informed as to the places in its districts in which home work is being done, occupiers of factories, workshops, or any place from which work is given out, and contractors employed by such occupiers are required, in regard to such classes of work as may be fixed by the Secretary of State, to keep lists showing the names and addresses of all persons employed by them, either as workmen or as contractors outside such factory, workshop, or place, and the place where they are employed, and to send to the Council twice a year (viz., on or before the 1st of February and the 1st August) copies of such lists.

“In the event of any occupier failing to keep or to send such lists he will be liable to a fine of £2 for the first offence, and to a fine of £5 for a second or subsequent offence. Proceedings to recover the fine may be taken by the Council.

“It will be the duty of the Council to have the lists so sent to them examined, and if the place of employment of any outworker included in the list is in another district, to furnish his name and place of employment to the Council of that district.”

The last requirement here, however, is one that has already entailed much extra clerical work upon my office. For example, we have had sent in by one firm this year a list containing the names and addresses of 295 out-workers, in 42 several districts outside the City. And to each of the Councils of these districts it became our duty, under the provision above mentioned, to forward at once a separate list of their out-workers sent to us.

During 1902 we had a similar experience, the same firm sending in a list which contained 200 names, in 40 separate districts outside. It must be remembered that this is only one case among many.

Sanitary Accommodation in Factories and Workshops.—The short Sanitary Accommodation Order issued by the Home Office, on February 4th, 1903 (to come into force on July 1st), stating the proportion and other conditions for W.Cs. and Urinals required in factories and workshops, is reproduced in the Appendix of this Report.

Means of Escape in Case of Fire—Additional means of escape in case of fire has been provided in six cases during the year, through the agency of the local inspectors.

A table of the various items of sanitary and other work carried out in factories and workshops, at the instance of these officers, will be found as usual at the end of this Report.

Midwives' Act, 1902.—The provisions of this Act (in full operation since April 1st, 1903), regarding the duties of local authorities, may be summarized as follows:—

Local Authorities are required:—

- 1st.—To give notice of the effect of the Act to those concerned.
- 2nd.—To exercise general supervision over all midwives practising within their area.
- 3rd.—To suspend any midwife from practice when such suspension appears necessary to prevent the spread of infection.
- 4th.—To report at once to the Central Midwives Board any midwife practising within their area, convicted of any offence.
- 5th.—To supply the Central Midwives Board in January of each year with the names and addresses of all midwives who have notified their intention to practice within their area, and to keep a current copy of the *Roll of Midwives*.
- 6th.—To report at once to Central Midwives Board the death, or change of name or address, of any midwife in their area.
- 7th.—To investigate charges of malpractice, negligence, or misconduct, on the part of any midwife practising within their area, and, should a *prima facie* case be established, to report to the Central Midwives Board.

The provisions have now all been complied with, and, up to the time of writing, notifications have been received from midwives of 3 cases of puerperal fever and 6 of still-births.

No midwives have been reported under Rules 4 and 7, but one has been suspended from practice for a fortnight. In each case of puerperal fever reported, disinfection has been carried out.

No steps have been taken for the instruction of midwives, as the Act has not given power to local authorities to incur any expenditure for this purpose.

Diseases of Animals Act, 1894. Orders, Regulations, etc., of the Board of Agriculture.—The reputed cases of swine fever reported to the Board of Agriculture and the Health Committee during 1903 were 53 in number, but the diagnosis was subsequently confirmed in only two of these. Both of these actual cases occurred in December.

The regulations of 1901 affecting the movement of swine in Nottingham remained in force until the spring of the current year (1904), when they were revoked and others substituted, of which the following is a brief epitome :

(a) Swine for slaughter within 5 days may be brought into the City, provided they are marked before arrival with a 9-inch red cross on the loins.

(b) No other living swine may be brought into the City.

(c) No living swine may be moved out of the City.

Lethal Chamber for Dogs, Cats, etc., at the Eastcroft Sanitary Dépôt.—This most useful and humane apparatus, which is still managed by the Health Department for the Watch Committee (who pay all expenses), has done every year, since its establishment in 1898, a largely increasing amount of work.

I give below the numbers of dogs and cats annually destroyed, from 1898 to 1903 inclusive :—

	1898.	1899.	1900.	1901.	1902.	1903.
Dogs	.... 422	.... 472	.... 731	.... 770	.... 856	.... 1078
Cats	.... 64	.... 108	.... 180	.... 297	.... 371	.... 455

Slaughter Houses.—The number of these on the City Register at the close of 1903 was still 152—the same as in 1902—but the plans of a new

slaughter-house at Bulwell Green were approved during the year, with the understanding that an annual licence should be issued on the completion of the buildings.

I may once more remind you that the preparation and inspection of butchers' meat cannot possibly be placed on a satisfactory footing until public abattoirs are established in the City.

Offensive Trades.—Four formal complaints have been received during the year respecting alleged nuisance in connection with three of the scheduled trades. All the matters complained of have been, for the time being at least, satisfactorily adjusted.

One application was made for permission to establish the trade of a tripe boiler. This was refused.

Unwholesome Food Material.—A extraordinarily large amount of food material was either seized by the Inspectors or surrendered, during the past year, as unfit for human consumption. The description and quantity of each class of food condemned is given in detail in the accompanying list.

Inspector H. T. Moore still performs the duties of Meat and Cattle Inspector, and Inspector Billington, Cert. San. Inst., those of Inspector of Fish and General Provisions. Both these officers do their work in a highly efficient manner, but both could do much more than at present if provided with an assistant.

BUTCHERS' MEAT.

BUTCHERS' MEAT.							Imperial Stones.	lbs.
Beef	..	..	..	..	..	..	3079	7
Pork	..	..	..	..	..	..	786	8
Mutton	..	..	..	..	..	..	428	1
Veal	..	..	..	..	..	..	244	8
Lamb	..	..	..	..	..	..	28	2
Viscera	..	..	..	..	..	..	998	2
Total						..	5565	0

GAME & POULTRY.

			Stones.
Rabbits	..	..	358 $\frac{3}{4}$
Hares	..	..	103
Turkeys	..	..	52 $\frac{3}{4}$
Geese	..	..	28 $\frac{1}{4}$
Chickens	..	..	21 $\frac{3}{4}$
Rooks	..	..	15
Black Game	..	..	9
Pheasants	..	..	2 $\frac{1}{2}$
Pigeons	..	..	1 $\frac{1}{2}$
Venison	..	..	1
Partridges	..	..	1

594 $\frac{1}{2}$
WET FISH.

			Stones.
Hake	..	..	1556 $\frac{1}{2}$
Cod	..	..	1371
Spragg	..	..	956 $\frac{1}{2}$
Herrings	..	..	825
Haddocks	..	..	475
Mackerel	..	..	469
Whiting	..	..	408 $\frac{1}{2}$
Mixed Fish	..	..	393
Ling	..	..	345
Sprats	..	..	311
Coal Fish	..	..	235 $\frac{1}{2}$
Dabs	..	..	236
Cat-Fish	..	..	105
Salmon	..	..	92 $\frac{1}{4}$
Skate	..	..	89 $\frac{1}{2}$
Codling	..	..	81
Halibut	..	..	78
Sea Bream	..	..	70
Witches	..	..	64
Lemon-Soles	..	..	63
Fish Roes	..	..	57 $\frac{1}{2}$
Salmon Trout	..	..	34 $\frac{1}{4}$
Conger-Eel	..	..	26
Plaice	..	..	17
Red-Mullet	..	..	8
Smelts	..	..	7 $\frac{1}{2}$
Soles	..	..	2
Char	..	..	1

8378 $\frac{1}{2}$
SHELL FISH.

			Stones.
Mussels	..	..	1997
Shrimps	..	..	707 $\frac{1}{2}$
Whelks	..	..	457 $\frac{1}{2}$
Oysters	..	..	360
Prawns	..	..	52
Crabs	..	..	30 $\frac{1}{2}$
Cockles	..	..	22
Periwinkles	..	..	4
Escallops	..	..	3
Lobsters	..	..	$\frac{1}{2}$

3634
DRY FISH.

			Stones.
Kippers	..	..	1172 $\frac{1}{2}$
Bloaters	..	..	570
Finneys	..	..	553

2295 $\frac{1}{2}$
FRUIT.

			Stones.
Tomatoes	..	..	552
Apples	..	..	135
Strawberries	..	..	129
Chestnuts	..	..	80
Cocoa Nuts	..	..	60
Pears	..	..	32
Cucumbers	..	..	26
Grapes	..	..	8
Blackberries	..	..	6 $\frac{1}{2}$
Bananas	..	..	4
Plums	..	..	$\frac{1}{2}$

1033 $\frac{1}{2}$
VEGETABLES.

			Stones.
Carrots	..	..	4926
Potatoes	..	..	1504
Cabbage	..	..	843
Kidney-Beans	..	..	759
Onions	..	..	659
Turnips	..	..	400
Peas	..	..	320
Broccoli	..	..	295
Celery	..	..	218
Parsnips	..	..	104
Brussel-Sprouts	..	..	74
Vegetable-Marrows	..	..	36
Sea-Kale	..	..	22
Lettuce	..	..	21
Cauliflowers	..	..	4

10185
TINNED GOODS.

			Stones.
Tomatoes	..	..	605
Lobsters	..	..	166
Milk	..	..	135 $\frac{3}{4}$
Apricots	..	..	118
Pineapples	..	..	83
Salmon	..	..	71 $\frac{1}{4}$
Pears	..	..	41
Peaches	..	..	13 $\frac{1}{2}$
Sardines	..	..	12 $\frac{1}{2}$
Apples	..	..	8
Rabbits	..	..	6 $\frac{1}{4}$

1260 $\frac{3}{4}$
MISCELLANEOUS.

			Stones.
Eggs	..	..	84
Giblets	..	..	8

92

Dairies and Cowsheds.—Since the appointment of Inspector Sutton it has been possible to undertake the revision of the Milksellers' Register. The revision is not yet completed, but no less than 431 names of persons who have given up business as milk-sellers, without notifying us of the fact, have up to the present been removed from the list. The latter now contains 537 names. Besides those who have voluntarily retired from the business, there are a large number of others who have been or will be required to give up the trade on account of the unfitness of their premises or precincts for the storage and sale of milk.

The Register of Cow-keepers now contains 165 names, an increase of 4 since 1902. This register is also under revision, and is quite as much in need of it as that of the milk-sellers. The time has also come, in my opinion, for insisting that some of the old-fashioned cow-keepers' premises should either be brought into line with the requirements of our local regulations or closed altogether. Many of these places, which are essentially unfit for further use as dairies and cowsheds, have been tinkered from time to time and thus obtained a new lease of existence, but the policy embodied by such a course as this is unsound, and, in the long run, injurious alike to the true interests of the local authority and the cow-keeper.

Sterilized Milk.—I have already referred to the subject of sterilized milk in the report on diarrhœa, and advocated the establishment by the Corporation of depôts for the sale of such milk at cost price to persons requiring it. Hand-fed babies can be brought up in perfect health and vigour with no other food than sterilized cows' milk. I have at the present time in my possession the history of 20 children who have

been exclusively fed upon such milk prepared as directed in the leaflet distributed from the Health Department. These children have had no symptoms of scurvy-rickets, and, except in one case, no serious disturbance of stomach or bowels. All are now well-nourished and healthy. If only the general use of such food, in fresh condition, for hand-fed infants amongst the poor, could be brought about, a large part of the infant mortality (which is at present a standing disgrace to modern civilization) would be at once prevented.

In my opinion, however, this reproach will continue until the State steps in to demand that the helpless infant shall receive, say, during the first year of life, only such food at any rate as a healthy child of that age is capable of digesting, and this food again in a reasonably clean and otherwise wholesome condition.

Ice Creams.—The situation in respect of these remains unchanged. I cannot, therefore, I think, do better than repeat the observations I made last year when referring to the subject. These were as follows:

“I wish once more to point out the desirability of obtaining special statutory control over the manufacture and sale of ice creams. A clause designed to afford you such control was inserted in the last local Bill before Parliament, but it was ultimately struck out as non-essential. It is not too much to say that the possession or non-possession of such powers by a local authority may make the difference of life or death to many people.”

Sale of Food and Drugs Acts, 1875-1899.
Adulteration and Abstraction.—The number of samples taken under these Acts during 1903, and sent to the City Analyst (Mr. S. R. Trotman, M.A., F.I.C.) for analysis, was 520. Of these 463 were certified as substantially pure or genuine, and 69 as adulterated or deficient.

Proceedings taken in respect of the last are dealt with in the next section.

	No. Samples.	No. of Pure.							
Gin	.. 8	.. 7	..	..	..	..	..	1. 6.0%	Deficient in Proof Spirit.
Port Wine	.. 2	.. 2	..	..	..	..	..	All Pure.	
Sherry	.. 2	.. 2	..	..	..	..	..	All Pure.	
								With Salicylic Acid.	
Raisin Wine	.. 1	.. —	..	..	..	..	..	1. 4.0 grains per pint.	
Lime Water	.. 9	.. 9	..	..	..	..	..	All Pure.	
Paregoric	.. 9	.. 9	..	..	..	..	..	All Pure.	
Laudanum	.. 11	.. 11	..	..	..	..	..	All Pure.	
Citric Acid	.. 6	.. 6	..	..	..	..	..	All Pure.	
								Deficient in Ethyl Nitrite.	
Spirits of Nitre	6	.. 4	..	..	..	..	..	1. 77.0%	
								1. 51.0%	
								2	
Potass. Iodide	1	.. 1	..	..	..	..	..	.. Pure.	
Sodii Salicyl.	5	.. 5	..	..	..	..	..	.. All Pure.	
Iron Pills	12	.. 12	..	..	..	..	..	.. All Pure.	
								Deficient in Magnesia.	
Gregory's Powder	7	.. 6	..	..	..	..	..	.. 1. 15.0%	
Prescriptions containing									
Potass. Iodide	8	.. 8	..	..	..	..	..	All Pure.	
	520	463						69	
Total Samples.		Pure.						Deficient or Adulterated.	

Prosecutions.—The following is a complete list of offences under the Sale of Food and Drugs Acts, the Public Health Act of 1875, etc., in respect of which proceedings were instituted by authority of the Health Committee during 1903, together with the result in each case.

The list is longer than in 1902, and it will be seen that the results were uniformly and strikingly successful.

SALE OF FOOD AND DRUGS ACTS.

OFFENCE.	RESULT.
Sale of Milk containing 11% added water	Fine of £5.
" " 10% "	Fine of £2.
" " 10% "	Fine of £2.
" " 10% "	Fine of 5/-
" " 9% "	Fine of £2 and costs.
" " 8% "	Fine of £2.
" " 8% "	Fine of £4.
" " 7½% "	Fine of £5.
" " 7½% "	Fine of £2.
" deficient in fat 55%	Fine of £3.
" " 22% and added water 16%	Fine of £6.
" " 11% " 5%	Fine of £1 12s. 6d.
" " 8% " 5%	Fine of 10/-
Sale of Butter containing 90% Margarine	Fine of £10.
" Olive Oil " 95% of Petroleum	Fine of £1 9s. 6d.
" Gin 6% under proof	Fine of £1.
" Spirits of Nitre 77% deficient in Ethyl Nitrite	Withdrawn on payments of cost by defendants
" " 51% " " "	
" Tincture of Opium 40% deficient in Alcohol	Fine of 10/-
" Gregory's Powder 17% " Magnesia	Fine of 10/-
Refusing to sell to Inspector	Fine of £5 11s. 9d.

PUBLIC HEALTH AND OTHER ACTS.

OFFENCE.	RESULT.
Exposure of Unsound Meat for Sale	Fine of £2.
" " Diseased " Pig for Sale	Fine of £1 and 8/6 costs
" " Unsound Plums for Sale	Fine of £5.
Deposit of " Meat "	Fine of £1.
Sale of Unsound Meat	Fine of £2.
	One Month imprisonment with hard labour.
" " " Exposure of Sheep affected with Sheep Scab	Fine of £1 and 11/6 costs.
Failure to notify a case of Small-pox, and exposure of an infected person in public places	Fine of 10/-
	Fine of £4.

Notices.—The formal notices sent out from the office of the Health Department during the past year were as follows:—

Ordinary Notices	....	1,082
Statutory „	....	237

There was a decline in the number of ordinary notices and an increase (of 90) in the statutory notices, as compared with the previous year. In addition to these notices, there were a large number of others informally conveyed by letter and by word of mouth.

District Inspectors, Special Inspectors, and Lady Health Visitors, and their Work.

—Notwithstanding the extra and very special work thrown upon the Department by the necessity of combating the small-pox outbreak of last year, the amount of work accomplished in the inspection and abatement of nuisances during the year shews a very considerable increase as compared with that of 1902. Details of the work done under this heading will be found in the table which follows the Section.

There is a substantial increase in two very important items on the list; viz., the cleansing and repair of dwellings, and the paving and draining of courts, alleys, and yards. The total of the first, as compared with that of the previous year, has gone up from 90 to 170, and of the second, from 220 to 389.

The call for a special effort on the part of the Inspecting and Office Staff of the Health Department has met with a hearty response, and all have worked for the common good with praiseworthy assiduity during the past year.

Inspector Sutton, whose special duty at the present time consists in the taking of samples for analysis under the Sale of Food and Drugs Acts and the inspection of Dairies and Milkshops, has been able to put in a good deal of time as a general inspector in the districts of Messrs. Byrns and Ward—detailed for special small-pox duty. Inspector Herbert Read, whose principal function is that of clerk in the Health Department at the Guildhall, has also done valuable work as a Sanitary Inspector, from time to time, whenever it has been possible to spare him from the office.

The two Lady Health Visitors, Miss Helen Bowers and Miss Sophie Buckoll, were not actually appointed as officers of the Department until the present year, but as they have been employed by the Ladies Sanitary Association of Nottingham on behalf of, and with the aid of a subsidy from, the Health Committee for some time past, I may perhaps be allowed to say a few words respecting their work. Their principal function consists in visiting the poor in their homes, and giving them advice and assistance in the feeding and care of infants, in sick nursing, and in the sanitary management of their houses and households; but they have also many other important duties, including the sanitary inspection of school premises, the visiting of school children reported to be suffering from minor infectious diseases, and the superintendence of the work of midwives under the new Midwives Act.

The importance of the work done by these ladies is now generally recognised, and in most towns where

they have been appointed their public usefulness has become so self-evident from the out-set as to lead to a speedy addition to their number.

Abatement of Nuisances, 1903.

DESCRIPTION OF WORK DONE.	Inspector Ward. Cer. San. In.	Inspector Old.	Inspector Byrns.	Inspector Betts.	Inspector Sutton. Cer. San. In.	TOTAL.
Houses Repaired	86	2	9	47	2	146
„ Cleansed	7	5	6	4	2	24
„ Overcrowding of, Abated..	1	10	..	6	3	20
Bath Wastes Disconnected ..	5	4	5	2	..	16
„ Trapped .. ..	..	14	6	1	..	21
Sink Wastes Disconnected ..	5	1	16	3	5	30
„ Trapped	1	..	2	13	1	17
Drains Repaired and Cleansed ..	202	97	139	222	56	716
„ Trapped	41	156	36	69	8	310
Water Closets Repaired	10	17	47	57	4	135
Pail Closets Repaired	177	90	90	123	29	509
„ Provided .. ..	..	..	..	..	..	..
Waste-water Closets Provided and Repaired	4	83	3	47	..	137
Ashpits Abolished	22	20	34	27	..	103
Privies Abolished	19	34	44	48	..	145
Water-Closets provided in lieu of Privies	19	38	43	33	..	133
Waste-water-Closets provided in lieu of Privies	1	..	..	10	..	11
Water-Closets provided in lieu of Pail-Closets	10	4	11	4	..	29
Soft-water Cisterns Cleansed ..	10	4	6	10	..	30
Courts and Yards Paved	179	43	63	91	13	389
Piggeries Abolished	5	23	3	7	1	39
Stables, etc., Drained	1	..	1	1	..	3
Urinals Repaired, etc.	3	3	4	..	1	11
Manure Pits Repaired, etc. ..	5	3	4	6	3	21
Offensive Accumulations Removed	15	36	28	16	19	114
Miscellaneous	155	51	168	128	41	543
TOTALS	983	738	768	975	188	3652

INSPECTOR FLINT. (MALE).

Work done.

Workshops and bakehouses limewashed	..	..	..	..	..	266
Workshops and bakehouses repaired	..	..	..	..	..	10
Offensive refuse removed .. ..	..	..	..	..	..	16
Additional ventilation provided in workshops	..	..	..	..	..	6
Defective drains and urinals repaired	..	..	..	..	..	4
New W.C.'s erected .. ..	..	..	..	..	..	15
Pail and W.C.'s repaired and cleansed	..	..	..	..	..	52
Insanitary bakehouses and workshops condemned and closed	..	..	..	..	..	3
Lavatory wastes disconnected and repaired	..	..	..	..	..	12
Offensive stable abolished .. ..	..	..	..	..	..	1
Defective drains abolished	..	..	..	..	..	3
Offensive urinals abolished	..	..	..	..	..	9
Sink wastes repaired .. ..	..	..	..	..	..	3
Privies and ashpits abolished	..	..	..	..	..	2

INSPECTOR EXTON. (FEMALE).

Work done.

Workrooms limewashed	..	..	..	..	..	..	..	114
Staircases limewashed	..	..	..	..	..	..	..	8
Overcrowding abated in workrooms			..	..	..	..	..	5
Stairs, floor, and ceiling repaired			..	..	..	..	..	5
W.C.'s repaired and altered		..	..	..	..	..	..	13
New W.C.'s provided	..	..	..	..	..	..	..	24
Additional ventilation provided	..	..	..	..	..	..	..	6
Heating apparatus provided		..	..	..	..	..	..	2
Sink waste repaired	..	..	..	..	..	..	..	2
W.C.'s re-arranged ..	..	..	..	..	..	..	..	20
W.C. provided with ventilated vestibule				..	..	..	..	3
								202

APPENDIX A.

HANDBILLS AND LEAFLETS.

City of Nottingham. The Feeding and Care of Infants.

- 1.—The natural and best food for a young infant is its mother's milk.
- 2.—The child should be suckled once every two hours during the day, and once every four hours during the night, until it is about three months old, and at gradually lengthening intervals after the lapse of this period.
- 3.—The child should, if possible, receive no other food than its mother's milk until it is at least six or seven months old.
- 4.—During the suckling period the mother should take plenty of good, plain, nourishing food, but should avoid alcoholic stimulants and spices.
- 5.—The mother should wash her nipples after each time of suckling. If they become sore she should apply some glycerine or lanoline to them, and, if necessary, use a nipple-shield carefully cleaned with soap and warm water after each time of using.

The following instructions may be advantageously followed, at the earlier ages in cases where the mother is unable to suckle her infant, and at the later ages in all cases.

(a) During the first six weeks after birth the child should be fed every two hours throughout the day, reckoned between 4 a.m. and 10 p.m., and once again between these hours in the night. Its food should consist of one part of fresh, pure cow's milk, and two parts of water, mixed and boiled, and, after boiling, sweetened with a small teaspoonful of Porto Rico sugar to each pint (of the mixture). Barley water may sometimes with advantage be used instead of plain water, but lime water is better avoided. The mixture should be kept in a clean covered vessel, and in a clean cool place, between meals. The temperature of the food given to a young child should be 95 degrees Fahrenheit, *i.e.*, about the heat of the human hand. One-and-a-half ounces (three tablespoonfuls) to two ounces (four tablespoonfuls) should be given to a child each time it is fed.

Two bottles should always be used, each alternately; one being scalded and rinsed, and afterwards left to soak, while the other is in actual use. The bottles should have no tube or neck, but have a mouth large enough to admit the first finger, and this should be fitted with an india-rubber teat only. The teats should be washed inside and out, after each time of using, with soap and warm water.

(b) From six weeks to three months old the child should be fed with a mixture of equal quantities of cow's milk and water, with sugar as above; but two teaspoonfuls of cream may now be advantageously added to each meal. The quantity given at each meal should be about four ounces (eight tablespoonfuls). The interval between meals should now be gradually but continually lengthened.

(c) From three months to seven months old the child should have a mixture of two parts of cow's milk to one of water. About four ounces (eight tablespoonfuls) should at first be given at each meal, but, the intervals between meals being still lengthened, a larger quantity than this will soon be required for each. The quantity of cream given with each meal may now be increased from two to three or four teaspoonfuls.

The following is a useful working rule for the feeding of a child, with such substitutes for mother's milk as mentioned above, during the period in which liquids should be exclusively used :—

Begin with about 16 oz. a day of twenty-four hours, as under (a). Increase this by the addition of 1 oz. to 2 oz. a week up to the end of the first month. After the first month add 4 oz. a month up to the end of the seventh month. At this period, unless the child is regularly to have some quantity of the farinaceous food mentioned in the next paragraph, its milk should amount to at least 40 oz. a day. At nine months a milk-fed child should have three pints in the twenty-four hours.

(d) From seven months to twelve months old the child should be given five meals in a day of twenty-four hours. The number of meals will thus have been reduced by a little more than one-half (from eleven to five) in the first seven months. Each meal should consist at the first of about five or six ounces (ten or twelve tablespoonfuls) of undiluted cow's milk, with cream as under (c); but three of the meals may also each contain about a teaspoonful or more of some whole-meal farinaceous food, well boiled and stirred up with the milk. All the meals in this period should be given between 6 or 7 a.m. and 9 or 10 p.m.

(e) From twelve months to eighteen months old the child should again be fed only during the day, and at about the same intervals (on five occasions) between early morning and night. The amount of milk should be about twice as great as given under (d), and porridge, bread and milk, bread and gravy, bread and butter, and a lightly boiled egg occasionally, may with advantage be given with, or in place of the milk as time goes on. It must not be forgotten, however, that pure fresh cow's milk, well boiled, is an excellent and sustaining food, as well as a palatable drink for human beings at all ages.

The quantities of food given above are those generally suitable, but the capacity of children for food varies much, and signs of indigestion due to over-feeding should not be overlooked because a comparatively moderate amount of food is being taken.

It is unwise for a mother to undertake the medical treatment of her child, except, perhaps, to the extent of giving it a little opening medicine occasionally. She should never give it sleeping or quieting medicine except under medical advice.

A young child should not on any account sleep in the same bed with nurse or parents.

A young child should be warmly but loosely clothed over the whole of its body and limbs, and as few pins as possible should be used in dressing it.

It should be remembered that a young child is exceedingly liable to suck or to swallow anything within its reach which admits of being so treated.

It should also be borne in mind that a young child has no dread of fire or hot things unless or until it is actually burnt.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health, Nottingham.

City of Nottingham. Prevention of Diarrhœa and Cholera.

These diseases may in great measure be avoided by the exercise of common care. Cleanliness of person and surroundings and a judicious diet are the best possible safeguards against them. Their germs enter the system through contaminated air, water, and food; it is most important, therefore, to secure the utmost possible purity of these three vital agents.

All parts of a house should be freely ventilated both by day and night:—there is as a rule much less harm to be apprehended from too much than too little fresh air, whatever its temperature or degree of moisture. No decomposing refuse should be allowed to remain in the house or its neighbourhood; all vegetable refuse should be burnt in the kitchen fire. The floors of all rooms, passages, and stairways should be frequently washed with soap and water, and all private courts, alleys, and yards should be flushed with fresh water, as often as possible. All dirty walls should be scraped and limewashed. All drains in the neighbourhood of the house should be flushed at short intervals, and all obstructions to the drainage and faults in the drains, which cannot be dealt with by the tenant, should be reported at once to the **Health Department in the Guildhall**. It is most important that all house drains should be completely disconnected from the sewers. All other offensive nuisances which are not receiving the necessary attention should also be at once reported.

The Public Water Supply of the town is now happily above the suspicion of contamination, but no water even from this source should be allowed to stand before being used for drinking purposes, and all water from private wells or other like sources should invariably be boiled before use.

Only sound and fresh flesh of any kind should be used as food, and this should be well cooked. The same remark applies to cooking vegetables of every description. Unripe or over-ripe fruit should be rigorously avoided. Infants under nine months of age should receive nothing but milk, or milk and water, well boiled, when the milk is from any other source than the mother's breast. All food utensils, and especially milk vessels and babies' feeding bottles, should be well washed and soaked before use, in clean, and, if possible, boiling water.

A qualified medical man should be at once called in to every case of severe bowel disturbance. It is a wise precaution to disinfect with strong solution of carbolic acid the bowel discharges of all Diarrhœa patients, before placing them in the closet pan or pail. All articles or material soiled with such discharges should be at once soaked and cleansed with the same solution.

After it has been ascertained that a patient is suffering from Asiatic Cholera it is essential that the strictest isolation should be maintained at home or in hospital, and that all discharges from the patient's body should be disinfected and placed in a separate receptacle, which will be provided and scavenged by the Corporation; and, further, that all articles soiled with such discharges should be promptly disinfected, or destroyed by fire. Persons attending upon Cholera patients should not touch with their hands, their own or other persons' faces, or any food or food utensil intended for their own or other unaffected person's use. Any case suspected to be one of **Cholera** should be at once notified to me at the **Health Department in the Guildhall**.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham.

Medical Officer of Health.

City of Nottingham. Prevention of Tuberculous Consumption.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it. It is, however, in many cases entirely curable under appropriate treatment.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should, as far as possible be received into a vessel containing a strong solution of Carbolic Acid (1 of Carbolic to 20 of Water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed.

The spit and other infectious matters from consumptive patients, whether disinfected or not, should always be destroyed (if possible by fire) before they become dry. They are most dangerous when dried, especially when taking the form of dust.

Consumptive patients should always sleep alone.

The rooms of consumptive patients should be freely ventilated both by day and night, and should be disinfected and cleaned (with damp cloths that have been soaked in disinfecting liquid) at short intervals.

Consumptive patients should spend as much time as possible in the open air. In case of the death or removal of any consumptive patient, the Health Department will undertake the disinfection of the infected house and materials.

A considerable proportion of milch cows suffer from tuberculous disease, and the milk of such cows, especially when the udders are affected, is liable to be highly charged with the tuberculous poison. It has been shown that animals taking tuberculous milk in the raw state are exceedingly liable to contract the disease; all ordinary cow's milk, therefore, should be sterilized or boiled before use.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham.

Medical Officer of Health.

Nottingham Corporation. Bagthorpe Hospital. Scarlet Fever.

TO PARENTS, GUARDIANS, AND OTHERS.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital, it is impossible in some instances to insure against such an accident, for no one can say with certainty how long the scarlet fever poison may lurk in the system. Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a Fever Hospital should be allowed to sleep in the same bed as another until at least a fortnight after such discharge. A short holiday in the country, spent as far as possible apart from others and in the open air, is always desirable for persons convalescing from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed, and otherwise protected against cold. Any recently discharged person who complains of sore throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated, and placed under the care of a medical man. In any case the Corporation cannot accept responsibility or liability for the outbreak of infection occurring among the companions of persons recently discharged from hospital.

PHILIP BOOBBYER, M.D., *Medical Superintendent.*

City of Nottingham. Small-Pox and Vaccination.

Small-Pox is once more prevalent in this District and many other parts of the Country, and numerous fresh cases are reported daily. It is, therefore, desirable for people resident in Nottingham (and elsewhere) to seek protection against it.

GOOD RECENT VACCINATION IS AN EFFICIENT PROTECTION AGAINST SMALL-POX, and the degree of protection it confers is directly proportional to the recentness and thoroughness of the operation.

All persons who have not been properly vaccinated or re-vaccinated within the past ten years, should be well vaccinated without delay.

The risk of injury from vaccination when considered in relation to the total amount of vaccination work done, is altogether insignificant.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham.

Medical Officer of Health.

**Official Notice under the Shop Hours Acts, 1892 to 1895,
to amend the Law relating to the Employment of
Young Persons in Shops.**

NOTICE IS HEREBY GIVEN that, under the above Acts, a young person cannot be employed in or about a shop for a longer period than seventy-four hours, including meal times, in any one week.

A young person cannot, to the knowledge of his employer, be employed in a shop who has been previously on the same day employed in any factory or workshop, as defined by the Factory and Workshop Act, 1878, for the number of hours permitted by the said Acts, or for a longer period than will, together with the time during which he has been so previously employed, complete such number of hours.

In every shop in which a young person is employed, a Notice must be kept exhibited by the employer in a conspicuous place, referring to the provisions of these Acts, and stating the number of hours in the week during which young persons may lawfully be employed therein. If any employer fails to keep exhibited this Notice in the manner required, he is liable to a fine not exceeding forty shillings.

Where any young person is employed in or about a shop contrary to the provisions of these Acts, the employer will be liable to a fine not exceeding one pound for each person so employed.

The Council of any County or Borough, and in the City of London the Common Council, may appoint such Inspectors as they may think necessary for the execution of these Acts within the areas of their respective jurisdictions, and Sections 68 and 70 of the Factory and Workshop Act, 1878, shall apply in the case of any such Inspector as if he were appointed under that Act, and as if the expression "Workshop," as used in those sections, included any shop within the meaning of these Acts.

In these Acts, unless the context otherwise requires, "Shop" means retail and wholesale shops, markets, stalls, and warehouses, in which assistants are employed for hire, and includes licensed Public-houses and Refreshment-houses of any kind.

"Young person" means a person under the age of eighteen years.

Other words and expressions have the same meanings respectively as in the Factory and Workshop Act, 1878.

Nothing in these Acts applies to shops where the only persons employed are members of the same family dwelling in the building of which the shop forms part, or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

And Notice is Hereby Given, that no young person can be employed in or about these premises for a longer period than seventy-four hours, including meal times, in any one week.

The Sanitary Accommodation Order of 4th February, 1903.

In pursuance of Section 9 of the Factory and Workshop Act, 1901, I hereby determine that the accommodation in the way of sanitary conveniences provided in a factory or workshop shall be deemed to be sufficient and suitable within the meaning of the said section if the following conditions are complied with and not otherwise:—

1. In factories or workshops where females are employed or in attendance there shall be one sanitary convenience for every 25 females.

In factories or workshops where males are employed or in attendance there shall be one sanitary convenience for every 25 males: provided that—

(a) In factories or workshops where the number of males employed or in attendance exceeds 100, and sufficient urinal accommodation is also provided, it shall be sufficient if there is one sanitary convenience for every 25 males up to the first 100, and one for every 40 after;

(b) In factories or workshops where the number of males employed or in attendance exceeds 500, and the District Inspector of Factories certifies in writing that by means of a check system, or otherwise, proper supervision and control in regard to the use of the conveniences are exercised by officers specially appointed for that purpose it shall be sufficient if one sanitary convenience is provided for every 60 males, in addition to sufficient urinal accommodation. Any certificate given by an Inspector shall be kept attached to the general register, and shall be liable at any time to be revoked by notice in writing from the Inspector.

In calculating the number of conveniences required by this order, any odd number of persons less than 25, 40, or 60, as the case may be, shall be reckoned as 25, 40, or 60.

2. Every sanitary convenience shall be kept in a cleanly state, shall be sufficiently ventilated and lighted, and shall not communicate with any work-room except through the open air or through an intervening ventilated space: provided that in work-rooms in use prior to 1st January, 1903, and mechanically ventilated in such a manner that air cannot be drawn into the work-room through the sanitary convenience, an intervening ventilated space shall not be required.

3. Every sanitary convenience shall be under cover and so partitioned off as to secure privacy, and if for the use of females shall have a proper door and fastenings.

4. The sanitary conveniences in a factory or workshop shall be so arranged and maintained as to be conveniently accessible to all persons employed therein at all times during their employment.

5. Where persons of both sexes are employed, the conveniences for each sex shall be so placed or so screened that the interior shall not be visible, even when the door of any convenience is open, from any place where persons of the other sex have to work or pass; and, if the conveniences for one sex adjoin those for the other sex, the approaches shall be separate.

6. This order shall come into force on the 1st day of July, 1903.

7. This order may be referred to as the Sanitary Accommodation Order of 4th February, 1903.

A. AKERS DOUGLAS,

One of His Majesty's Principal
Secretaries of State.

Home Office, Whitehall,
4th February, 1903.

APPENDIX B.

The following Report is furnished by Mr. John Terry, Wharf Superintendent:—

COLLECTION OF REFUSE.

Pail Closets.—The number of pail closets now on our books is 37,432, shewing a reduction of 185 as compared with the previous year, and 326 less than in 1901. In the early part of the year you decided that no more wooden pails should be purchased, and since that time only galvanized steel pails have been obtained, with the result that at the present time 7,998 of these pails are in use, principally in the Meadow Platts District. Every pail is emptied at least once per week and many are scavenged several times per week. We have emptied during the year 2,612,064 pails, equal to 50,232 per week. Each pail has been emptied on an average 69·7 times during the year: during 1902 the average was 69·5.

The number of loads removed was 124,385, or 2,392 per week.

I am again pleased to record that the complaints as to neglect of emptying pails have been very few, and I believe that the work generally has been carried out in a satisfactory manner.

The following table gives a comparative statement of the number of pails emptied during the past 13 years:—

**Number of Pails Collected during the 13 years
ending December 31st, 1903.**

YEAR.	NOTTINGHAM	BASFORD AND BULWELL.	RADFORD AND LENTON.	TOTAL.	WEEKLY AVERAGE.
1891	1,503,674	560,127	432,324	2,496,125	48,002
1892	1,523,965	580,061	446,687	2,550,713	49,052
1893	1,525,804	587,718	443,960	2,557,482	49,182
1894	1,559,608	605,349	445,606	2,610,563	50,203
1895	1,594,130	631,219	432,450	2,657,799	51,111
1896	1,598,814	636,951	441,126	2,676,891	51,478
1897	1,568,172	636,744	444,859	2,649,775	50,957
1898	1,542,856	638,493	468,070	2,649,419	50,950
1899	1,529,546	637,420	478,475	2,645,441	50,874
1900	1,522,549	640,976	475,195	2,638,720	50,745
1901	1,510,423	640,653	476,124	2,627,200	50,523
1902	1,496,922	638,370	481,970	2,617,262	50,332
1903	1,488,385	641,390	482,289	2,612,064	50,232

Ashpits.—This work is still on the increase and during the year we have emptied 2,564 privy ashpits, 1,199 dry ashpits, and 15 cesspools, and there has been removed therefrom 5,808, 2,182, and 41 loads respectively, giving a total of 8,031 loads, as compared with 7,933 in the previous year and 4,654 loads in 1901. We have now got the work in the Bulwell and Basford district well in hand. There has been an entire absence of complaints, and the proportion of applications for the emptying of ashpits to the number emptied has been very small.

Dry Ash Bins.—There are now on the books 14,242 ash pans or tubs, (8,580 are worked from the Eastcroft Depot, and 5,662 from the district depots). The number at the end of 1902 was 12,190, thus showing an increase of 2,052. The figures for the previous years are not available; I have therefore obtained from the City Engineer's Department the figures as to number of new houses erected during the past seven years. These are given below, and afford a reliable basis for estimating the growth of this department of work.

Year	...	...	1897	1898	1899	1900	1901	1902	1903
			<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Houses erected			784	900	837	871	850	1258	1630

The regular dry ash carts have collected during the year 15,837 loads, and the pot carts 2,421 loads, a total of 18,258, or 351 per week, as against 305 per week during 1902. This increase is equivalent to three extra dry ash sets, or an additional expenditure of nearly £500 per year.

While on this subject I do not think it is out of place to call your attention to the entire absence of uniformity in the shape or size of the receptacles used for storing domestic refuse. People imagine that anything will do for this purpose, with the result that at one place the receptacle is too large to carry, and at another it is too small to contain the ashes; so that in each case the time of your men is lost in unnecessary handling of the refuse. I would beg to suggest that you seriously consider the question of insisting that each house, (not having a pail closet or ashpit), be supplied with a pan or tub of uniform size provided with a suitable cover.

Slaughter House Refuse.—There have been collected from slaughter-houses by your Department 918 loads of refuse. The new method of collecting this refuse in covered galvanized pails continues to give every satisfaction, and the number of such pails now in use is 206. The hire of these pails amounts to £25 15s. 0d. per year.

The following table shows the total number of loads collected in each district during the past nine years.

Number of Loads Collected.

	1895	1896	1897	1898	1899	1900	1901	1902	1903
NOTTINGHAM:—									
Pail-Closets	75,911	76,134	74,675	73,469	72,835	72,502	71,925	71,282	70,876
Night Ashpits	2,460	2,278	2,391	2,406	2,263	2,372	2,291	2,148	1,758
D.A. Pits and D.A. Tubs .	8,820	9,518	10,230	11,851	13,275	14,055	15,018	11,000	11,673
Slaughter-house	975	1,037	1,021	1,034	1,023	1,058	1,123	1,060	918
Pot Cart	1,348	1,379	1,390	1,360	1,371	1,817	2,043	2,215	2,421
BASFORD & BULWELL:—									
Pail-Closets	30,058	30,331	30,321	30,404	30,353	30,522	30,507	30,398	30,543
Night Ashpits								1,037	2,047
D.A. Tubs								5,035	6,346
RADFORD & LENTON:—									
Pail-Closets	20,593	21,006	21,183	22,289	22,784	22,628	22,673	22,951	22,966
Night Ashpits	1,951	2,666	2,844	3,276	2,779	2,083	2,363	2,426	2,003
TOTALS	142,116	144,349	144,055	146,089	146,683	147,037	147,943	149,552	151,551
WEEKLY AVERAGES ..	2,733	2,775	2,770	2,809	2,821	2,828	2,845	2,876	2,914

Disposal of Refuse.—The exceptional wetness of last year made the disposal of night soil a more difficult matter than usual, but in spite of this fact I am pleased to state that the stocks of manure on hand are now less than they have been for several years. Night-soil to the amount of 54,858 tons has been disposed of to farmers as follows:—By boat 18,203 tons; by rail from Eastcroft 11,213 tons; from Basford 6,431 tons; from Radford 7,856 tons; and from Bulwell 25 tons; by traction engines from Eastcroft and Radford 3,256 tons; taken direct to farms by drays 5,488 tons; and carted by farmers from Eastcroft 386 tons. The above figures show a total increase over those for 1902 of 7,632 tons.

The difficulty of disposing of Dry Ashes and Trade Refuse has now been solved by the erection of Destructors at Eastcroft and Radford. The first one commenced work in July last and since that date has consumed 11,215 tons of refuse, and is now capable of consuming all the dry refuse produced in the south part of the City, while the one at Radford will be able to deal with all that from the western part of the City. The refuse from the Bulwell and Basford District is still sent to the Eastcroft, and during the year 5,958 tons were sent there by rail at a cost of £583.

There has been removed from the refuse heap at the Eastcroft, 13,337 tons, and I am pleased to say that, within a few weeks, the whole of the refuse which has been accumulating during the past 20 years will have entirely disappeared.

The following table shows the quantities of nightsoil sent out by rail and boat during the past nine years:—

Disposal of Refuse.

	1895	1896	1897	1898	1899	1900	1901	1902	1903
No. of Wagons sent out ..	4,109	3,134	3,091	3,595	3,145	1,984	3,077	3,151	3,130
	T. C. Q.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.
Average Weight per Wagon..	7 17 2	7 18	7 19 3	7 19 1	8 1 2	8 0	8 1 2	8 2 2	8 3 0
No. of Boats sent out ..	359	574	514	479	592	734	633	580	613
	T. C. Q.	T. C.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.
Average Weight per Boat ..	32 10 0	32 10	32 17	33 6 1	33 2 2	31 10 1	29 17 2	29 3 2	29 13 3

The whole of the refuse received at the Eastcroft (except that from pail closets) is now weighed, and the figures for the past two years are as follows:—

	1902. Tons.	1903. Tons.
Dry Ashes	10,891	11,901
Wet Ashpit Refuse...	1,988	1,517
Trade Refuse (General) ...	2,629	3,397
Trade Refuse (Butchers, &c.) ...	2,038	2,430
Ashes from Basford and Bulwell...	1,830	4,884
Rammel from Radford ...	612	1,074
Total	<u>19,988</u>	<u>25,203 tons.</u>

While dealing with the question of disposal it may be interesting to note that the following materials have been collected from the refuse, and sold:—

	Tons.	Cwt.	Qrs.
Solder (recovered from old tins) ...	1	7	0
Light tins (from solder furnace) ...	114	12	1
Heavy Iron	10	2	0
Light Iron	6	2	3
Light Hoops	40	18	0
Galvanized Scrap	12	1	2

The sale of the above realised the sum of £178 16s. 11d.

Depôts.—These are, as previously, four in number, situate as follows:—Eastcroft, Radford, Basford and Bulwell.

Your policy of gradually improving your depôts has been continued during the past year, and the new hospital for sick horses has now been completed; also an additional new harness room has been erected. Each of your harness rooms at the central dépôt is now heated by means of steam, therefore it is now possible to keep the harness dry and in a much more satisfactory condition than hitherto. As stabling has been provided for 13 horses at Radford, we have given up the unsatisfactory stables previously occupied, and an improvement in the condition of the horses is already apparent. Now that there are horses constantly at this dépôt it is very desirable that a house should be erected there for the horsekeeper, and I trust that during the present year you will see your way to make this provision. A new office and weighing machine are also very much needed. At Basford and Bulwell we continue to occupy stables that are far from satisfactory, but as the land for a new dépôt has now been purchased I hope that you will give the necessary instructions for the erection of stables and other buildings forthwith.

HORSES.

Total number of Horses Dec. 31st, 1902	...	98
Disposed of during 1903 ...	...	8
Purchased during 1903 ...	...	15
Number of Horses at Eastcroft ...	...	67
„ „ „ „ Basford ...	...	21
„ „ „ „ Radford ...	...	11
„ „ „ „ Bulwell ...	...	4
„ „ „ „ Bagthorpe ...	...	2
Total number		<u>105</u>

The average working life of the horses disposed of was 7 years. This average is a satisfactory one, and compares very favourably with that of the previous year ($4\frac{1}{4}$ years). The horses sold during the year realised £22 12s. 0d., and each horse purchased cost £47.

The health of the horses in use during the year has been most satisfactory. The costs of food stuffs has been less than during 1902, with the result that the cost of horse keep has fallen from 16/9 per horse per week to 14/-. This latter figure, considering the amount of work performed by your horses, is a most reasonable one.

Rolling Stock.—With the exception of one cart and one railway truck which have been broken up as past repair, the whole of the stock has been kept in good order. One covered dry ash cart and two ordinary open ones have been purchased, and the stock now consists of 63 drays, 61 carts, 1 wagon, and 32 railway trucks.

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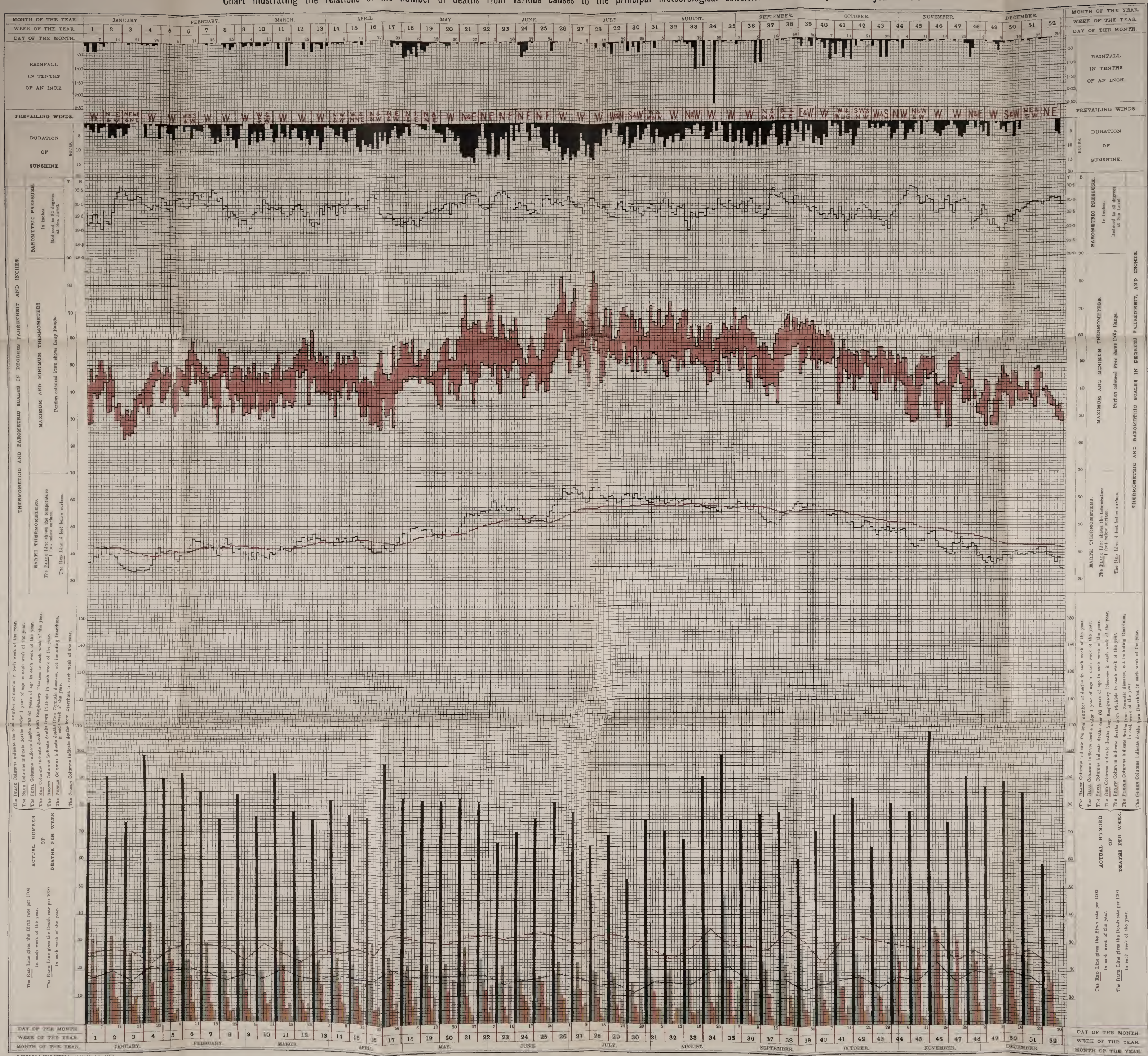
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CITY OF NOTTINGHAM.

Chart illustrating the relations of the number of deaths from various causes to the principal Meteorological conditions on each day of the year 1903.



The actual number of Deaths from Epidemic Influenza is indicated by a vertical BLACK Line in the column representing Deaths from Respiratory Diseases.

Readings taken at 9 a.m.
Rainfall, Sunshine and Maximum Temperature
is entered to previous day.

Estimated Population of the City, middle of 1903.	245,985.
" " " " 1904.	248,819.
Area of the City ...	10,935 acres.

Total Births during the year, 6943
Birth Rate per 1000 of population per annum, 28·3.

Total Deaths, during the year, 4129.
Death Rate per 1000 of population per annum, 16.9.

ARTHUR BROWN, M. Inst. C.E., F. R. Met. Soc.
City Engineer.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health.

